

Supplementary Materials 1. The four tasks used for the study: sentences, corresponding target structures and type of structures (distinguishing between structures with no embedding and no movement, with embedding, with movement, with embedding and movement)

Table S1.1. Italian SRT with story

	SENTENCE	TARGET STRUCTURE	TYPE OF STRUCTURE
(1)	C'era una volta un alieno che andava sulla Terra con la sua navicella. [Once upon a time there was an alien who went to Earth with its spaceship]	subject relative	embedding; movement
(2)	Ad un certo punto, la navicella si rompe e cade in una foresta. [At one point, the spaceship breaks and crashes down into a forest]	coordination between main clauses	no embedding; no movement
(3)	L'alieno è tanto triste perché non è riuscito a guidarla. [The alien is sad because he has not managed to control it]	adverbial clause (causal)	embedding; no movement
(3')	L'alieno è tanto triste perché non è riuscito a guidarla. [The alien is sad because he has not managed to control it]	negation	no embedding; no movement
(3'')	L'alieno è tanto triste perché non è riuscito a guidarla . [The alien is sad because he has not managed to control it]	non-finite complement clause	embedding; no movement
(4)	Inoltre non sa proprio come rimettere insieme i pezzi e ripararla. [Furthermore, he does not know how to put the pieces back together and fix it]	non-finite complement clause	embedding; movement
(4')	Inoltre non sa proprio come rimettere insieme i pezzi e ripararla . [Furthermore, he does not know how to put the pieces back together and fix it]	coordination between subordinate clauses	no embedding; no movement
(5)	Arriva un castoro che un cacciatore sta inseguendo nella foresta. [There comes a beaver that a hunter is hunting in the forest]	object relative	embedding; movement
(6)	Un castoro vede l'alieno che disperato cerca aiuto. [A beaver sees the alien who searches desperately for help]	subject relative	embedding; movement
(7)	Lo raggiunge e gli chiede cosa mai gli sia successo. [He approaches him and asks him what has happened to him]	coordination between main clauses	no embedding; no movement
(7')	Lo raggiunge e gli chiede cosa mai gli sia successo . [He approaches him and asks him what has happened to him]	finite complement clause	embedding; movement
(8)	L'alieno gli dice che la navicella ha smesso di funzionare. [The alien tells him that the spaceship has ceased to work]	finite complement clause	embedding; no movement
(8')	L'alieno gli dice che la navicella ha smesso di funzionare .	non-finite complement clause	embedding; no movement

	[The alien tells him that the spaceship has ceased to work]		
(9)	Alcuni pezzi, l'alieno li ha persi durante la caduta. [Some of the pieces the alien has lost during the crash]	clitic left dislocation	movement
(10)	Il castoro trova i pezzi che l'alieno sta cercando . [The beaver finds the pieces that the alien is searching for]	object relative	embedding; movement
(11)	Li raccoglie e prova a rimmetterli insieme con un cacciavite. [He collects them and tries to put them back together with a screwdriver]	coordination between main clauses	no embedding; no movement
(11')	Li raccoglie e prova a rimmetterli insieme con un cacciavite. [He collects them and tries to put them back together with a screwdriver]	non-finite complement clause	embedding; no movement
(12)	Dopoché ha messo i pezzi insieme , accende il motore. [After he has put the pieces back together, he tries to turn on the engine]	adverbial clause (temporal)	embedding; no movement
(12')	Dopoché ha messo i pezzi insieme, accende il motore . [After he has put the pieces back together, he tries to turn on the engine]	SVO	no embedding; no movement
(13)	Il povero animale viene circondato improvvisamente da un fumo nero . [The poor animal is suddenly surrounded by black smoke]	Long actional passive	movement
(14)	Ma il motore , il castoro non riesce ad accenderlo . [But the engine, the beaver cannot manage to activate it]	clitic left dislocation	movement
(14')	Ma il motore, il castoro non riesce ad accenderlo. [But the engine, the beaver cannot manage to activate it]	negation	no embedding; no movement
(15)	Chi stanno cercando gli alieni sul nostro pianeta e perché? [Who are the aliens looking for on our planet and why?]	object wh-question	movement
(16)	Il castoro chiede all'alieno e lui risponde in modo serio. [The beaver asks the alien and he answers in a very serious manner]	SVO	no embedding; no movement
(16')	Il castoro chiede all'alieno e lui risponde in modo serio.	coordination between main clauses	no embedding; no movement
(17)	Cerchiamo animali gentili che vengano sul nostro pianeta [we are searching for kind animals who might come to our planet]	subject relative	embedding; movement
(17')	Cerchiamo animali gentili che vengano sul nostro pianeta [we are searching for kind animals who might come to our planet]	SV	no embedding; no movement
(18)	per salvarlo dalla guerra interna che lo sta distruggendo. [in order to save it from the internal war which is destroying it]	adverbial clause (final)	embedding; no movement
(18')	per salvarlo dalla guerra interna che lo sta distruggendo .	subject relative	embedding; movement

	[in order to save it from the internal war which is destroying it]		
(19)	Gli alieni saranno aiutati da un animale della Terra. [The aliens will be helped by an animal on the Earth]	long actional passive	movement
(20)	Il castoro, l'alieno lo vuole portare con sé sul suo pianeta [It was the beaver that the alien wants to bring with him to his planet]	clitic left dislocation	movement
(20')	Il castoro, l'alieno lo vuole portare con sé sul suo pianeta [It was the beaver that the alien wants to bring with him to his planet]	modal	no embedding; no movement
(21)	perché ha visto che è un animale dal cuore d'oro. [because he sees that he is an animal with a golden heart]	adverbial clause (causal)	embedding; no movement
(21')	perché ha visto che è un animale dal cuore d'oro. [because he sees that he is an animal with a golden heart]	finite complement clause	embedding; no movement
(22)	Intanto il castoro ripara la navicella e la mostra all'alieno. [In the meantime, the beaver repairs the spaceship and shows it to the alien]	coordination between main clauses	no embedding; no movement
(23)	Lui guarda ammirato il motore che il castoro ha riparato. [He looks admired at the engine that the beaver has repaired]	object relative	embedding; movement
(24)	La navicella può essere guidata di nuovo dall'alieno. [The spaceship can be driven by the alien again]	long actional passive	movement
(25)	Il castoro accende la navicella che prima sembrava distrutta. [The beaver activates the spaceship, which seemed completely ruined before]	subject relative	embedding; movement
(26)	Decide di salirci e seguirlo nello spazio. [He decides to enter it and follow him into space]	non-finite complement clause	embedding; no movement
(26')	Decide di salirci e seguirlo nello spazio. [He decides to enter it and follow him into space]	coordination subordinate clauses	no embedding; no movement
(27)	Quali alieni conoscerà il castoro nello spazio? [Which aliens will the beaver meet in space?]	object wh-question	movement

Table S1.2. Italian SRT without story

	SENTENCE	TARGET STRUCTURE	Syllables
(1)	Un maiale spingeva una mucca che andava lenta nella stalla. [A pig pushed a cow that proceeded slowly in the barn]	subject relative	embedding; movement
(2)	Di solito i vasi cadono a terra e si rompono in mille pezzi. [Usually the vases fall on the ground and break in a thousand pieces]	coordination between main clauses	no embedding; no movement
(3)	La ragazza è triste perché non è riuscita a guidare la macchina. [The girl is sad because she did not manage to drive the car]	adverbial clause (causal)	embedding; no movement
(3')	La ragazza è triste perché non è riuscita a guidare la macchina. [The girl is sad because she did not manage to drive the car]	negation	no embedding; no movement
(3'')	La ragazza è triste perché non è riuscita a guidare la macchina. [The girl is sad because she did not manage to drive the car]	non-finite complement clause	embedding; no movement
(4)	La signora non sa come preparare una bella torta e decorarla. [The lady does not know how to make a beautiful cake and decorate it]	non-finite complement clause	embedding; movement
(4')	La signora non sa come preparare una bella torta e decorarla. [The lady does not know how to make a beautiful cake and decorate it]	coordination between subordinate clauses	no embedding; no movement
(5)	Arriva un asino che un coniglio sta rincorrendo nel cortile. [A donkey arrives, that a rabbit is chasing in the yard]	object relative	embedding; movement
(6)	La pecora vede l'uccello che disperato vola nel cielo. [The sheep sees the bird that flies desperate in the sky]	subject relative	embedding; movement
(7)	Lei vede il fratello e gli chiede cosa mai gli sia capitato. [She sees the brother and asks him what has happened to him]	coordination between main clauses	no embedding; no movement
(7')	Lei vede il fratello e gli chiede cosa mai gli sia capitato. [She sees the brother and asks him what has happened to him]	finite complement clause	embedding; movement
(8)	I pompieri sentono che la signora ha smesso di chiamarli. [The firemen hear that the lady has stopped calling them]	finite complement clause	embedding; no movement
(8')	I pompieri sentono che la signora ha smesso di chiamarli. [The firemen hear that the lady has stopped calling them]	non-finite complement clause	embedding; no movement
(9)	Alcune finestre , il nonno le ha chiuse durante il temporale. [Some windows, the grandpa has closed them during the storm]	clitic left dislocation	movement
(10)	Il veterinario lava il cane che il leone sta accarezzando.	object relative	embedding; movement

	[The veterinary washes the dog that the lion is caressing]		
(11)	Lei sporca le coperte e prova a pulirle con lo smacchiatore. [She soils the blankets and tries to clean them with the stain remover]	coordination between main clauses	no embedding; no movement
(11')	Lei sporca le coperte e prova a pulirle con lo smacchiatore. [She soils the blankets and tries to clean them with the stain remover]	non-finite complement clause	embedding; no movement
(12)	Dopoché ha messo la lettera nella busta, lei colora un disegno. [After putting the letter in the envelope, she colors a drawing]	adverbial clause (temporal)	embedding; no movement
(12')	Dopoché ha messo la lettera nella busta, lei colora un disegno . [After putting the letter in the envelope, she colors a drawing]	SVO	no embedding; no movement
(13)	L'autista viene bloccato improvvisamente dal traffico intenso. [The driver is suddenly blocked by the intense traffic]	long actional passive	movement
(14)	I pantaloni , la ragazza non riesce a lavarli in casa. [The trousers, the girl does not manage to wash them at home]	clitic left dislocation	movement
(14')	I pantaloni, la ragazza non riesce a lavarli in casa. [The trousers, the girl does not manage to wash them at home]	negation	no embedding; no movement
(15)	Chi stanno invitando le ragazze per la festa e perché? [Who are the girls inviting for the party? And why?]	object wh-question	movement
(16)	La nonna telefona al nipote e lui risponde in modo serio. [The grandma phones the grandson. And he answers in a serious way]	SVO	no embedding; no movement
(16')	La nonna telefona al nipote e lui risponde in modo serio. [The grandma phones the grandson. And he answers in a serious way]	coordination between main clauses	no embedding; no movement
(17)	Cerchiamo pesci rossi che entrino veloci nel mare dal nostro fiume. [We look for goldfishes that may rapidly enter the sea from our river]	subject relative	embedding; movement
(17')	Cerchiamo pesci rossi che entrino veloci nel mare dal nostro fiume. [We look for goldfishes that may rapidly enter the sea from our river]	SV	no embedding; no movement
(18)	Prendono l'osso per nascondarlo dai cani che lo stanno cercando. [They take the bone to hide it from the dogs that are searching it]	adverbial clause (final)	embedding; no movement
(18')	Prendono l'osso per nasconderlo dai cani che lo stanno cercando . [They take the bone to hide it from the dogs that are searching it]	subject relative	embedding; movement
(19)	Gli uomini saranno aiutati da un'infermiera in ospedale. [The men will be helped by a nurse in the hospital]	long actional passive	movement
(20)	Il nipote , la nonna lo vuole portare con sé nel suo ufficio nuovo.	clitic left dislocation	movement

	[The grandson, the grandma wants to take him with her to her new office]		
(20')	Il nipote, la nonna lo vuole portare con sé nel suo ufficio nuovo. [The grandson, the grandma wants to take him with her to her new office]	modal	no embedding; no movement
(21)	Loro hanno visto che lo zio piange, perché è arrabbiato . [They have seen the uncle cries, because he is angry]	adverbial clause (causal)	embedding; no movement
(21')	Loro hanno visto che lo zio piange , perché è arrabbiato. [They have seen the uncle cries, because he is angry]	finite complement clause	embedding; no movement
(22)	Loro trovano sempre le caramelle sui banchi e le offrono ai passanti. [They always find the candies on the desks and offer them to the passers]	coordination between main clauses	no embedding; no movement
(23)	Lui tocca curioso il trattore che il contadino ha guidato . [He touches curious the tractor that the farmer has driven]	object relative	embedding; movement
(24)	Il latte può essere bevuto di nuovo dal bambino la mattina. [The milk can be drunk again by the child in the morning]	long actional passive	movement
(25)	La volpe morde il cane che prima sembrava abbaiare furioso. [The fox bites the dog that seemed to bark furiously before]	subject relative	embedding; movement
(26)	Loro decidono di comprare un panino e di mangiarlo. [They decide to buy a sandwich and eat it]	non-finite complement clause	embedding; no movement
(26')	Loro decidono di comprare un panino e di mangiarlo . [They decide to buy a sandwich and eat it]	coordination subordinate clauses	no embedding; no movement
(27)	Quali bambine abbraccerà la mamma dopo la scuola? [Which girls will the mom hug after the school?]	object wh-question	movement

Table S1.3. German SRT with story

	SENTENCE	TARGET STRUCTURE	TYPE OF STRUCTURE
(1)	Es war einmal ein Alien, der sich entschied mit einem Raumschiff zur Erde zu fliegen. [Once upon a time there was an alien who decided to fly to Earth with its spaceship]	subject relative	embedding; movement
(2)	Auf einmal geht das Raumschiff kaputt und fällt in einen Wald. [Suddenly the spaceship breaks and falls into a wood]	coordination between main clauses	no embedding; no movement
(3)	Der Alien ist traurig, da er es nicht richtig kontrollieren konnte . [The alien is sad, because he did not manage to control it]	adverbial clause (causal)	embedding; no movement
(3')	Der Alien ist traurig, da er es nicht richtig kontrollieren konnte . [The alien is sad, because he did not manage to control it]	negation	no embedding; no movement
(3'')	Der Alien ist traurig, da er es nicht richtig kontrollieren konnte. [The alien is sad, because he did not manage to control it]	non-finite verb	embedding; no movement
(4)	Außerdem weiß er nicht, wie er die Teile wieder zusammenfügen und es reparieren sollte. [Moreover he does not know how to join the pieces together and to repair it]	finite complement clause	embedding; movement
(4')	Außerdem weiß er nicht, wie er die Teile wieder zusammenfügen und es reparieren sollte . [Moreover he does not know how to join the pieces together and to repair it]	coordination between subordinate clauses	no embedding; no movement
(5)	Dann kommt ein Biber, den ein Jäger im Wald verfolgt . [Then a beaver comes, that a hunter chases in the forest]	object relative	embedding; movement
(6)	Der Biber sieht den Alien, der dringend Hilfe sucht . [the beaver sees the alien, who urgently looks for help]	subject relative	embedding; movement
(7)	Er kommt auf ihn zu und fragt ihn , was passiert ist? [He comes towards him and asks what has happened]	coordination between main clauses	no embedding; no movement
(7')	Er kommt auf ihn zu und fragt ihn, was passiert ist? [He comes towards him and asks what has happened]	finite complement clause	embedding; movement
(8)	Der Alien erzählt ihm, dass das Raumschiff aufhörte zu funktionieren. [The alien tells him that the spaceship ceased to function]	finite complement clause	embedding; no movement
(8')	Der Alien erzählt ihm, dass das Raumschiff aufhörte zu funktionieren . [The alien tells him that the spaceship ceased to function]	non-finite complement clause	embedding; no movement
(9)	Einige Teile hat der Alien verloren, als der Unfall passierte. [Some parts, the alien has lost them, when the accident took place]	Topicalization	movement
(10)	Der Biber findet die fehlenden Teile, die der Alien gesucht hat . [The beaver finds the missing parts that the alien has looked for]	object relative	embedding; movement
(11)	Er nimmt sie und versucht , sie mit einem Schraubenzieher wieder zu reparieren.	coordination between main clauses	no embedding; no movement

	[He takes them and tries to fix them with a screwdriver]		
(11')	Er nimmt sie und versucht, sie mit einem Schraubenzieher wieder zu reparieren . [He takes them and tries to fix them with a screwdriver]	non-finite complement clause	embedding; no movement
(12)	Nachdem er die Teile wieder repariert hatte , versucht er, den Motor zu starten. [After he has put the pieces back together, he tries to start the motor]	adverbial clause (temporal)	embedding; no movement
(12')	Nachdem er die Teile wieder repariert hatte, versucht er , den Motor zu starten. [After he has put the pieces back together, he tries to start the motor]	SVO	no embedding; no movement
(13)	Das arme Tier ist plötzlich von schwarzem Rauch umgeben . [The poor animal is suddenly surrounded by a black smoke]	long actional passive	movement
(14)	Den Motor hat der Biber nicht geschafft zu reparieren. [The motor, the beaver has not managed to repair it]	topicalization	movement
(14')	Den Motor hat der Biber nicht geschafft zu reparieren. [The motor, the beaver has not managed to repair it]	negation	no embedding; no movement
(15)	" Nach wem suchen die Aliens auf unserem Planeten und warum?" [What do the aliens look for on our planet, and why?]	object wh-question	movement
(16)	Der Biber fragt den Alien und er antwortet mit einem ernsten Gesicht. [The beaver asks the alien and he answers with a serious face]	SVO	no embedding; no movement
(16')	Der Biber fragt den Alien und er antwortet mit einem ernsten Gesicht. [The beaver asks the alien and he answers with a serious face]	coordination between main clauses	no embedding; no movement
(17)	"Wir suchen nach lieben Tieren, die auf unseren Planeten mitkommen möchten ". [We look for kind animals, that would love to come to our planet]	subject relative	embedding; movement
(17')	"Wir suchen nach lieben Tieren, die auf unseren Planeten mitkommen möchten ". [We look for kind animals, that would love to come to our planet]	SV	no embedding; no movement
(18)	" Um ihn vor dem Kampf der Aliens , der ihn zerstört, zu retten ". [In order to save it from the war of aliens that destroys it]	adverbial clause (final)	embedding; no movement
(18')	"Um ihn vor dem Kampf der Aliens, der ihn zerstört , zu retten". [In order to save it from the war of aliens that destroys it]	subject relative	embedding; movement
(19)	Die Aliens werden von einem Tier von der Erde gerettet . [The aliens are saved by an animal of the earth]	long actional passive	movement
(20)	Es ist der Biber, den der Alien zu seinem Planeten nehmen will. [It is the beaver, who the alien wants to bring to his planet]	cleft	movement
(20')	Es ist der Biber, den der Alien zu seinem Planeten nehmen will .	modal	no embedding; no movement

	[It is the beaver, who the alien wants to bring to his planet]		
(21)	Da er sehen kann , dass er ein Tier mit einem Herz aus Gold ist. [Because he can see that he is an animal with a heart of gold]	adverbial clause (causal)	embedding; no movement
(21')	Da er sehen kann, dass er ein Tier mit einem Herz aus Gold ist . [Because he can see that he is an animal with a heart of gold]	finite complement clause	embedding; no movement
(22)	In der Zwischenzeit hat der Biber das Raumschiff repariert und zeigt es dem Alien. [In the meantime, the beaver has repaired the spaceship and shows it to the alien]	coordination between main clauses	no embedding; no movement
(23)	Erstaunt sieht er den Motor, den der Biber repariert hat . [He looks astonished at the motor that the beaver has repaired]	object relative	embedding; movement
(24)	Das Raumschiff kann wieder von dem Alien geflogen werden . [The spaceship can be flew again by the alien]	long actional passive	movement
(25)	Der Biber startet das Raumschiff, das vorher kaputt aussah . [The beaver starts the spaceship that seemed destroyed before]	subject relative	embedding; movement
(26)	Er beschließt es zu besteigen und ihm in den Weltraum zu folgen. [He decides to get on it and follow him into the space]	non-finite complement clause	embedding; no movement
(26')	Er beschließt es zu besteigen und ihm in den Weltraum zu folgen . [He decides to get on it and follow him into the space]	coordination subordinate clauses	no embedding; no movement
(27)	Welche Aliens wird der Biber im Weltraum kennenlernen? [Which aliens will the beaver meet in the space?]	object wh-question	movement

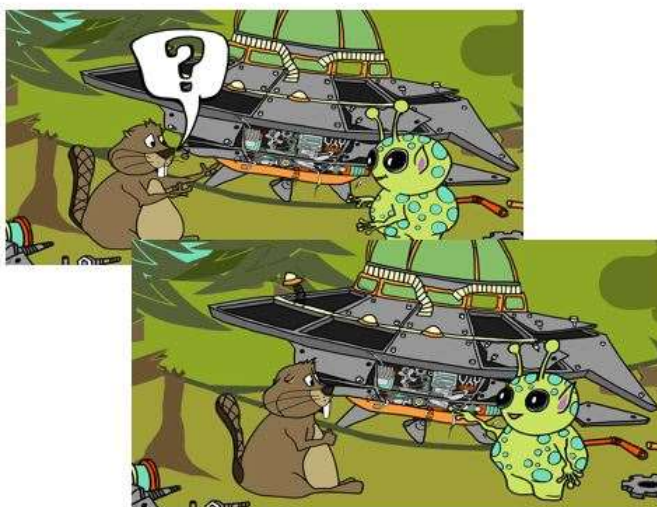
Table S1.4. German SRT without story

	SENTENCE	TARGET STRUCTURE	TYPE OF STRUCTURE
(1)	Ein Schwein schubst eine Kuh, die langsam in den Stall geht. [A pig pushes a cow that proceeds slowly in the barn]	subject relative	embedding; movement
(2)	Gewöhnlich fallen die Vasen auf den Boden und zerbrechen in tausend Teile. [Usually the vases fall on the ground and break in a thousand pieces]	coordination between main clauses	no embedding; no movement
(3)	Das Mädchen ist traurig, weil sie das Auto nicht fahren kann. [The girl is sad because she cannot drive the car]	adverbial clause (causal)	embedding; no movement
(3')	Das Mädchen ist traurig, weil sie das Auto nicht fahren kann. [The girl is sad because she cannot drive the car]	negation	no embedding; no movement
(3'')	Das Mädchen ist traurig, weil sie das Auto nicht fahren kann. [The girl is sad because she cannot drive the car]	non-finite verb	embedding; no movement
(4)	Die Frau weiß nicht, wie man einen schönen Kuchen backt und ihn dekoriert. [The woman does not know how to bake a beautiful cake and decorate it]	finite complement clause	embedding; movement
(4')	Die Frau weiß nicht, wie man einen schönen Kuchen backt und ihn dekoriert. [The woman does not know how to bake a beautiful cake and decorate it]	coordination between subordinate clauses	no embedding; no movement
(5)	Es kommt ein Esel, den ein Hase im Hinterhof verfolgt. [Here comes a donkey, that a rabbit chases in the backyard]	object relative	embedding; movement
(6)	Das Schaf sieht den Vogel, der verzweifelt in den Himmel fliegt. [The sheep sees the bird that flies desperately in the sky]	subject relative	embedding; movement
(7)	Sie sieht den Bruder und fragt ihn , was mit ihm passiert ist? [She sees the brother and asks him what has happened to him]	coordination between main clauses	no embedding; no movement
(7')	Sie sieht den Bruder und fragt ihn, was mit ihm passiert ist? [She sees the brother and asks him what has happened to him]	finite complement clause	embedding; movement
(8)	Die Feuerwehrmänner hören, dass die Frau aufhörte , sie zu rufen. [The firemen hear that the woman has ceased to call them]	finite complement clause	embedding; no movement
(8')	Die Feuerwehrmänner hören, dass die Frau aufhörte, sie zu rufen. [The firemen hear that the woman has ceased to call them]	non-finite complement clause	embedding; no movement
(9)	Einige Fenster hat der Großvater während des Sturms geschlossen. [Some windows, the grandpa has closed them during the storm]	topicalization	movement
(10)	Der Tierarzt hat den Hund gewaschen, den der Löwe streichelt. [The veterinary has washed the dog that the lion caresses]	object relative	embedding; movement

(11)	Sie macht die Decken schmutzig und versucht , sie mit dem Fleckenentferner zu reinigen. [She soils the blankets and tries to clean them with the stain remover]	coordination between main clauses	no embedding; no movement
(11')	Sie macht die Decken schmutzig und versucht, sie mit dem Fleckenentferner zu reinigen . [She soils the blankets and tries to clean them with the stain remover]	non-finite complement clause	embedding; no movement
(12)	Nachdem sie den Brief in einen Umschlag gesteckt hat , malt sie ein Bild. [After she has put the letter in the envelope, she colors a drawing]	adverbial clause (temporal)	embedding; no movement
(12')	Nachdem sie den Brief in einen Umschlag gesteckt hat, malt sie ein Bild . [After she has put the letter in the envelope, she colors a drawing]	SVO	no embedding; no movement
(13)	Der Fahrer wird plötzlich von einem Stau aufgehalten . [The driver is suddenly blocked by a traffic jam]	long actional passive	movement
(14)	Die Hose kann das Mädchen nicht zu Hause waschen. [The trousers, the girl cannot wash them at home]	topicalization	movement
(14')	Die Hose kann das Mädchen zu Hause nicht waschen. [The trousers, the girl cannot wash them at home]	negation	no embedding; no movement
(15)	Wen werden die Mädchen zu der Feier einladen und warum? [Who will the girls invite to the party and why?]	object wh-question	movement
(16)	Die Großmutter ruft den Enkel an und er antwortet auf eine ernste Weise. [The grandma phones the grandson and he answers in a serious way]	SVO	no embedding; no movement
(16')	Die Großmutter ruft den Enkel an und er antwortet auf eine ernste Weise. [The grandma phones the grandson and he answers in a serious way]	coordination between main clauses	no embedding; no movement
(17)	Wir suchen nach roten Fischen, die schnell aus unserem Fluss ins Meer schwimmen . [We look for goldfishes that swim rapidly from our river to the see]	subject relative	embedding; movement
(17')	Wir suchen nach roten Fischen, die schnell aus unserem Fluss ins Meer schwimmen . [We look for goldfishes that swim rapidly from our river to the see]	SV	no embedding; no movement
(18)	Sie nehmen den Knochen, um ihn vor den Hunden zu verstecken , die ihn suchen. [They take the bone in order to hide it from the dog that looks for it]	adverbial clause (final)	embedding; no movement
(18')	Sie nehmen den Knochen, um ihn vor den Hunden zu verstecken, die ihn suchen . [They take the bone in order to hide it from the dog that looks for it]	subject relative	embedding; movement
(19)	Die Männer werden von einer Krankenschwester im Krankenhaus gerettet . [The men are saved by a nurse in the hospital]	long actional passive	movement
(20)	Den Enkel wollte die Großmutter in ihr neues Büro mitnehmen. [The grandson, the grandma wanted to bring him to her new office]	topicalization	movement
(20')	Den Enkel wollte die Großmutter in ihr neues Büro mitnehmen.	modal	no embedding; no movement

	[The grandson, the grandma wanted to bring him to her new office]		
(21)	Sie sehen, dass der Onkel weint, da er traurig ist. [They see that the uncle cries because he is sad]	adverbial clause (causal)	embedding; no movement
(21')	Sie sehen, dass der Onkel weint, da er traurig ist. [They see that the uncle cries because he is sad]	finite complement clause	embedding; no movement
(22)	Sie finden immer Süßigkeiten auf den Tischen und bieten sie Passanten an. [They always find sweets on the desks and offer them to the passers]	coordination between main clauses	no embedding; no movement
(23)	Neugierig berührt er den Traktor, den der Bauer gefahren hat. [He curiously touches the tractor that the farmer has driven]	object relative	embedding; movement
(24)	Milch kann wieder von dem Kind am Morgen getrunken werden. [The milk can be drunk again by the child in the morning]	long actional passive	movement
(25)	Der Fuchs beißt den Hund, der vorher wie wild zu bellen schien. [The fox bites the dog that seemed to bark like mad before]	subject relative	embedding; movement
(26)	Sie beschließen ein Sandwich zu kaufen und es zu essen. [They decide to buy a sandwich and eat it]	non-finite complement clause	embedding; no movement
(27)	Sie beschließen ein Sandwich zu kaufen und es zu essen. [They decide to buy a sandwich and eat it]	coordination subordinate clauses	no embedding; no movement
(28)	Welche Mädchen wird die Mutter nach der Schule umarmen? [Which girl will the mother hug after the school?]	object wh-question	movement

Figure S1.1 Two consecutive pictures from the Sentence Repetition Tasks with story. The children first heard the sentence and then looked at the corresponding picture.



Supplementary Materials 2 Description and analysis of the questionnaire

The description of the questionnaire and Table S2 are taken from the Supplementary Materials of Torregrossa et al. (2022), since we used the same questionnaire in both studies. The Supplementary Materials by Torregrossa et al. (2022) can be found at the following link:

<https://onlinelibrary.wiley.com/action/downloadSupplement?doi=10.1111%2Flang.12552&file=lang12552-sup-0002-Appendix.pdf>

We included the following four modules in the questionnaire.

- *home language history* (amount of exposure before the age of three, between three and six and at six);
- *early literacy experience* (book reading by parents in the child's preliterate years);
- *current language use* (language currently spoken with family members and friends and during after-school activities);
- *current literacy experience* (literacy practices outside school, such as writing e-mails or reading books).

Table S1 provides some sample questions for each module.

Table S2 The structure of the questionnaire to assess children's dominance in language experience

<i>Module</i>	<i>Sub-modules</i>	<i>Questions (example)</i>	<i>Maximum score (German)</i>	<i>Maximum score (Italian)</i>
A. Home language history	0-3 years	(i) <i>Which languages did your child hear and speak from birth until the age of 3? (3 options: "mainly Greek", "mainly Italian", "both")</i>	5 (persons with whom the child interacted, including "mother", "father", "sibling 1", "sibling 2", "grandparents")	5 (persons with whom the child interacted, including "mother", "father", "sibling 1", "sibling 2", "grandparents")
	3-6 years	(i) <i>Which languages did your child hear and speak around kindergarten age (3-6)? (3 options: "mainly Greek", "mainly Italian", "both")</i>	7 (persons with whom the child interacted, including "mother", "father", "sibling 1", "sibling 2", "grandparents", "kindergarten teacher", "kindergarten friends")	7 (persons with whom the child interacted, including "mother", "father", "sibling 1", "sibling 2", "grandparents", "kindergarten teacher", "kindergarten friends")
	6 years	(i) <i>Which language did your child</i>	7 (persons with whom the child interacted, including "mother",	7 (persons with whom the child interacted, including "mother",

		<i>hear and speak when s/he was about six and started going to school?</i> (3 options: “mainly Greek”, “mainly Italian”, “both”)	“father”, “sibling 1”, “sibling 2”, “grandparents”)	“father”, “sibling 1”, “sibling 2”, “grandparents”, “kindergarten teacher”, “kindergarten friends”)
B. Early literacy experience		(i) <i>In which language(s) did you or other family members read books with stories and fairytales to your child, before she entered the school?</i>	4 (persons that read books to the child, including “mother”, “father”, “sibling 1” and “sibling 2”)	4 (persons that read books to the child, including “mother”, “father”, “sibling 1” and “sibling 2”)
C. Current language use	Language use at home	(i) <i>Who speaks which language to your child?</i> (ii) <i>Which language does your child use when s/he talks to that person?</i>	12 (persons from which the child receives language input, including “mother”, “father”, “sibling 1”, “sibling 2”, “grandparents” and “friends” and persons to which the child talks – the same options as above)	12 (persons from which the child receives language input, including “mother”, “father”, “sibling 1”, “sibling 2”, “grandparents” and “friends” and persons to which the child talks – the same options as above)
	Language use across activities	(i) <i>In which language does your child talk to her/himself?</i>	4 (number of given activities, including talking to oneself, memorizing numbers, swearing, telling the time)	4 (number of given activities, including talking to oneself, memorizing numbers, swearing, telling the time)
D. Current literacy experience	Language use across literacy-related activities	(i) <i>In which language does your child write e-mails?</i>	7 (number of given activities, including counting, writing shopping lists, reading aloud alone, reading aloud in front of others, texting on the phone,	7 (number of given activities, including counting, writing shopping lists, reading aloud alone, reading aloud in front of others, texting on the phone,

			writing e-mails, writing postcards)	writing e-mails, writing postcards)
	Frequency of language use across literacy-related activities	(i) <i>How often do you visit website in Greek/Italian?</i>	12: 3 options – often (3 pt.), sometimes (2 pt.) and rarely (1 pt.) – for 4 activities, including watching TV, visiting websites, playing videogames, reading books/magazines/comics	12: 3 options – often (3 pt.), sometimes (2 pt.) and rarely (1 pt.) – for 4 activities, including watching TV, visiting websites, playing videogames, reading books/magazines/comics

A. *Analysis of the home language history module.* For each submodule (0-3, 3-6 and 6 years), the maximum score corresponds to the number of persons speaking to the child. For example, the maximum score associated with a child with two siblings but no grandparent is 4 (i.e., “mother”, “father”, “sibling 1” and “sibling 2”). We derived a score for German and Italian, corresponding to the number of persons speaking “mainly Greek” and “mainly Italian” to the child, respectively. For answers stating that “both” languages were used in equal proportion, we split the associated scores between the two languages. As a second step, we calculated the ratio between the language specific score and the maximum score of the submodule. Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance of language experience in Italian in the corresponding submodule, while a negative score reflects dominance in German. Finally, we calculated the score corresponding to the whole module “home language history” as the mean between the partial scores obtained in each submodule. Thus, the value of this module may range between +1 (language experience only in Italian) to -1 (language experience only in Greek).

B. *Analysis of the early literacy experience module.* For this module, the maximum score corresponds to the number of persons reading books to the child, before s/he entered school. For example, 2 is the maximum score associated with a child to whom only the mother and the father read books. We derived a score for German and Italian, corresponding to the number of persons who read books “mainly in German” and “mainly in Italian” to the child, respectively. For answers stating that “both” languages were used in equal proportion, we split the associated scores between the two languages. As a second step, we calculated the ratio between the language specific score and the maximum score of the submodule. Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance in early literacy experience in Italian, while a negative score reflects dominance in German. As in the case of Module A, the value of Module B may range between +1 (early literacy experience only in Italian) to -1 (early literacy experience only in German).

C. *Analysis of the current language use module.* This module consists of two submodules, one related to children’s language use at home and the other to their language use across different activities.

For the submodule related to *language use at home*, the maximum score corresponds to the sum of the number of persons providing language input to the child and the number of persons to which the child talks (language output). For example, the maximum score associated with a child interacting (both input and output) with 5 persons (e.g., “mother”, “father”, “sibling 1”, “grandparents” and “friends”) is 10. We derived a score for German and Italian, corresponding to the sum of the number of persons providing input to the child and the number of persons to which the child talks *mainly in German* or *mainly in Italian*, respectively. For answers stating that “both”

languages were used in equal proportion, we split the associated scores between the two languages. As a second step, we calculated the ratio between the language specific score and the maximum score of the submodule. Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance of language experience in Italian in the corresponding submodule, while a negative score reflects dominance in German.

For the submodule related to *language use across activities*, the maximum score corresponds to the number of activities listed in the questionnaire (see Table S1 above). We derived a score for German and Italian, corresponding to the number of activities associated with the answer “mainly in German” and “mainly in Italian”, respectively. For answers stating that “both” languages were used in equal proportion, we split the associated scores between the two languages. As a second step, we calculated the ratio between the language specific score and the maximum score of the submodule (i.e., 4). Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance of language use in Italian in the corresponding submodule, while a negative score reflects dominance in German.

Finally, we calculated the score corresponding to the whole module “current language use” as the mean between the score corresponding to the submodules *language use at home* and *language use across activities*, respectively.

D. Analysis of the current literacy experience. This module consists of two submodules, one related to children’s *language use across literacy-related activities* and the other to the frequency of use of one language or the other during different literacy-related activities.

For the former module, the maximum score corresponds to the number of activities listed in the questionnaire (see Table S1 above). We derived a score for German and Italian, corresponding to the number of activities associated with the answer “mainly in German” and “mainly in Italian”, respectively. For answers stating that “both” languages were used in equal proportion, we split the associated scores between the two languages. As a second step, we calculated the ratio between the language specific score and the maximum score of the submodule (i.e., 7). Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance of language use in Italian in the corresponding submodule, while a negative score reflects dominance in German.

For the latter module (frequency of language use across literacy-related activities), the maximum score corresponds to 12 points, i.e., the case in which one language is used “often” (3 points) across all four activities listed in the questionnaire. We derived a score for German and Italian, corresponding to the sum of the frequency scores related to the different activities. As a second step, we calculated the ratio between this sum and the maximum score of the submodule (i.e., 12). Then, we subtracted the ratio obtained for German from the one obtained for Italian, whereby a positive score indicates dominance of language use in Italian in the corresponding submodule, while a negative score reflects dominance in German.

Finally, we calculated the score corresponding to the whole module “current literacy experience” as the mean between the score corresponding to the submodules *language use across literacy-related activities* and *frequency of language use across literacy-related activities*, respectively.

Overall, each child was associated with four differential scores, corresponding to each of the above-mentioned modules. Each differential score ranged between +1 (corresponding to language exposure only in Italian) and -1 (corresponding to language exposure only in German).

Reference

Torregrossa, J., Eisenbeiß, S., & Torregrossa, J. 2022. Boosting metalinguistic awareness under dual language activation: Some implications for bilingual education. *Language Learning*. <https://doi.org/10.1111/lang.12552>.

Supplementary Materials 3. Calculation of children’s dominance score based on an exploratory factor analysis

Table S3.1 Correlation matrix between the dominance-related variables included in the exploratory factor analysis. Two asterisks indicate significance at the .01 level.

	Dominance in vocabulary score	Dominance in home language history	Dominance in early literacy practices	Dominance in current language use	Dominance in current literacy practices
Dominance in vocabulary score	1.00				
Dominance in home language history	.90**	1.00			
Dominance in early literacy practices	.77**	.79**	1.00		
Dominance in current language use	.87**	.86**	.74**	1.00	
Dominance in current literacy practices	.83**	.72**	.66**	.74**	1.00

Figure S3.2 Scree plot of the correlation matrix in Table S3.1

Non Graphical Solutions to Scree Test

