

WordDriver-1 and WordDriver-2 AxNW Lists

These are the response forms used to document participant responses on the dependent variables - the Assessment Nonword Lists (AxNW Lists) used in the research reported in Seiler & Leitão 2023.

This research follows the thesis research (Seiler, Leitão, & Blosfelds, 2018) which developed and evaluated a web app targeting accurate decoding for children with severe and persistent word reading impairment. The current research replicated the thesis research, and developed a second stage of the decoding Intervention which aims to teach grapheme-phoneme knowledge for vowel spelling patterns.

Current research

Seiler, A.M., Leitão, S., 2023. "Targeting phonological recoding to support orthographic learning: effectiveness of WordDriver delivered via telehealth", Australian Journal of Learning Difficulties (open access www.elr.com.au/links/BNJKD).

Abstract: Fluent word recognition is an essential component of skilled reading, yet most children with reading difficulty have impaired word recognition. We developed and evaluated a web app, WordDriver, delivered via teletherapy, which targets phonological recoding to support orthographic learning and efficient word recognition. Participants were five children (aged 7–10 years) who, despite previous intervention using a systematic, synthetic phonics approach, demonstrated persistent word recognition impairment. Two studies, each using a single case experimental design examined changes in decoding accuracy (study 1) and orthographic learning (study 2) as measured by researcher-developed nonword reading and spelling lists, and standardised nonword reading assessments. Results suggested that all participants, irrespective of oral language and phonological processing profiles, made significant gains in decoding accuracy and orthographic learning for targeted vowel digraphs on researcher-developed nonword reading assessments, with clinically significant gains on standardised measures of decoding, and trends for generalisation in spelling.

Thesis research

Seiler, A., Leitão, S., & Blosfelds, M. (2018). WordDriver-1: evaluating the efficacy of an app-supported decoding intervention for children with reading impairment. *International Journal of Language & Communication Disorders*, 54(2), 155-305. doi:doi:10.1111/1460-6984.12388

Nonwords - Set: 1 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	ip		
2	zad		
3	yec		
4	rab		
5	yag		
6	kak		
7	ubs		
8	dand		
9	celd		
10	celp		
11	crid		
12	julk		
13	zens		
14	twal		
15	clin		
16	clcl		
17	bups		
18	sleg		
19	skob		
20	brald		
21	gwulp		
22	prens		
23	glalc		
24	bolds		
25	tweds		
26	zomps		
27	fects		
28	flugs		
29	twegs		
30	blopts		
31	struft		
32	scrift		
33	scraks		
34	spleks		
35	swusks		

Nonwords - Set: 2 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	og		
2	nas		
3	nez		
4	vop		
5	wep		
6	dez		
7	uft		
8	tant		
9	dwom		
10	lalk		
11	glid		
12	rols		
13	spes		
14	nevs		
15	drec		
16	snez		
17	zept		
18	twus		
19	gwub		
20	steld		
21	brilm		
22	dwost		
23	pends		
24	slolt		
25	tolts		
26	bults		
27	plubs		
28	himps		
29	skift		
30	stists		
31	plends		
32	sposts		
33	dwintz		
34	spraps		
35	dwalms		

Nonwords - Set: 3 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	yi		
2	nos		
3	lod		
4	teb		
5	fiv		
6	int		
7	cez		
8	lins		
9	bint		
10	nomp		
11	viln		
12	hebs		
13	keft		
14	gwal		
15	blag		
16	glot		
17	elps		
18	kuds		
19	isks		
20	brold		
21	drilm		
22	frots		
23	plaft		
24	fisps		
25	smeks		
26	bafts		
27	splak		
28	yasps		
29	fulfs		
30	scrits		
31	rompts		
32	crilns		
33	flalbs		
34	plimps		
35	scumps		

Nonwords - Set: 4 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	om		
2	noz		
3	mek		
4	beb		
5	ceg		
6	jeb		
7	jif		
8	wems		
9	scom		
10	lalf		
11	dalk		
12	mesk		
13	kisk		
14	higs		
15	wulp		
16	stog		
17	jegs		
18	druv		
19	skoz		
20	glild		
21	drilk		
22	flilt		
23	belms		
24	smols		
25	yilds		
26	zalks		
27	lufts		
28	twums		
29	scrud		
30	sprild		
31	stisks		
32	splets		
33	sprans		
34	skefts		
35	gwempt		

Nonwords - Set: 5 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	ek		
2	yoc		
3	hoz		
4	zon		
5	kef		
6	evs		
7	ums		
8	liln		
9	scis		
10	miln		
11	dods		
12	sult		
13	fips		
14	dulk		
15	gapt		
16	dwav		
17	dwet		
18	skol		
19	brug		
20	trint		
21	trand		
22	plis		
23	plamp		
24	dwuns		
25	selms		
26	slelt		
27	scalk		
28	sempt		
29	scroc		
30	screts		
31	stilns		
32	glilts		
33	spelds		
34	smucts		
35	splums		

Nonwords - Set: 6 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	ag		
2	hib		
3	yef		
4	rud		
5	wec		
6	vic		
7	ulf		
8	habs		
9	grof		
10	caks		
11	zilm		
12	jalt		
13	jens		
14	smed		
15	gibs		
16	stip		
17	drac		
18	skam		
19	snup		
20	smild		
21	gwulb		
22	yends		
23	drasp		
24	trums		
25	rimps		
26	kalks		
27	slelm		
28	glecs		
29	snect		
30	prolts		
31	prolks		
32	flelts		
33	glalms		
34	splimp		
35	smemps		

Nonwords - Set: 7 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	ut		
2	tas		
3	yeg		
4	rup		
5	kem		
6	vib		
7	kav		
8	tavs		
9	smis		
10	cals		
11	snid		
12	hols		
13	flod		
14	peft		
15	funcs		
16	stos		
17	gwet		
18	slig		
19	snum		
20	stold		
21	stoms		
22	frels		
23	cralt		
24	gwist		
25	zilds		
26	scret		
27	kompt		
28	slebs		
29	biscs		
30	splund		
31	brolks		
32	scribs		
33	scipts		
34	plilms		
35	smolks		

Nonwords - Set: 8 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	ud		
2	yoZ		
3	mec		
4	boz		
5	kel		
6	ipt		
7	isc		
8	fant		
9	gwis		
10	palk		
11	jans		
12	fots		
13	wapt		
14	gwod		
15	treb		
16	ceps		
17	zags		
18	crim		
19	spac		
20	slild		
21	spost		
22	gralf		
23	glols		
24	braps		
25	sneD		
26	smusk		
27	snoms		
28	twoms		
29	wempt		
30	grents		
31	plintz		
32	splect		
33	gresks		
34	prusps		
35	flimps		

Nonwords - Set: 9 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	vo		
2	nad		
3	gog		
4	tem		
5	wev		
6	yab		
7	isp		
8	wemp		
9	frit		
10	rilk		
11	nens		
12	jasp		
13	jalc		
14	dags		
15	blas		
16	plog		
17	nugs		
18	bliv		
19	swic		
20	clold		
21	prilt		
22	frols		
23	plapt		
24	pomps		
25	slems		
26	delms		
27	flegs		
28	sweps		
29	scrim		
30	grilts		
31	glents		
32	slelts		
33	swasts		
34	splift		
35	clulks		

Nonwords - Set: 10 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	fu		
2	foz		
3	lon		
4	cug		
5	roz		
6	vos		
7	umf		
8	soms		
9	prot		
10	gilm		
11	zacs		
12	jult		
13	vemp		
14	dult		
15	dreb		
16	sneb		
17	cluv		
18	crav		
19	swof		
20	blald		
21	slict		
22	glunt		
23	blags		
24	drevs		
25	jonts		
26	smamp		
27	kipts		
28	snalp		
29	scrog		
30	broelts		
31	snants		
32	smonts		
33	cralbs		
34	clompt		
35	swisks		

Nonwords - Set: 11 (length=35)

ID Code:**Score 60:****Date:****Score Total:****Session ID:**

1	yo		
2	wat		
3	neb		
4	sog		
5	zeg		
6	moz		
7	jiv		
8	haps		
9	gros		
10	zont		
11	tisk		
12	wusp		
13	zalc		
14	scod		
15	tref		
16	stav		
17	trag		
18	prac		
19	brum		
20	greld		
21	brilk		
22	treps		
23	brams		
24	snuns		
25	cacts		
26	dilks		
27	slusk		
28	hulps		
29	rulfs		
30	slopts		
31	gompts		
32	smands		
33	snasts		
34	twafsts		
35	snimps		

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-1
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	shou
2	louch
3	vouth
4	thouge
5	jaice
6	yoach
7	chouth
8	vaise
9	haith
10	shoap
11	koath
12	phoach
13	haitch
14	daitch
15	woathe
16	shount
17	floun
18	doung
19	roung
20	droam
21	ploaf
22	shraim
23	snoal
24	scaif
25	ploathe
26	phloak
27	traint
28	straim
29	scoung
30	splaim

WordDriver-2 Nonwords
Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-2
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	aith
2	ouse
3	zoat
4	youch
5	bouth
6	nouge
7	vaim
8	shaice
9	shoath
10	yoam
11	maive
12	soathe
13	vaitch
14	toathe
15	spou
16	stoun
17	crouth
18	traim
19	bloal
20	droath
21	swoat
22	swaitch
23	craint
24	sprouse
25	stroun
26	stroach
27	splaise
28	spouge
29	scrait
30	sploak

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] **Set: 1-3**
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	poat
2	gouse
3	zouch
4	vaice
5	chouge
6	shouth
7	zaif
8	choan
9	daith
10	coaf
11	whoath
12	faitch
13	baitch
14	joaf
15	glou
16	daint
17	brouge
18	sloul
19	thoung
20	shrain
21	glaice
22	shroap
23	scoan
24	fraith
25	phlouch
26	phroam
27	swoath
28	phlaith
29	stroat
30	scrout

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] **Set: 1-4**
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	nouch
2	kouth
3	soach
4	zaice
5	chouse
6	kait
7	cout
8	shain
9	shoak
10	goak
11	phaif
12	moathe
13	whaith
14	ounge
15	goathe
16	thount
17	flain
18	drouth
19	cloal
20	snoun
21	skouth
22	praim
23	proach
24	fraise
25	cloach
26	phroap
27	dwaith
28	phloul
29	smoathe
30	splaice

WordDriver-2 Nonwords
Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-5
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	doat
2	wouse
3	zouth
4	sout
5	yaice
6	whouge
7	naif
8	thoach
9	vaith
10	choath
11	ount
12	daive
13	shaitch
14	poam
15	zoap
16	dwout
17	flouse
18	throuth
19	phrouge
20	froak
21	thwail
22	sp oan
23	shraith
24	skoal
25	splou
26	spoaf
27	scaitch
28	twoam
29	thraint
30	straif

WordDriver-2 Nonwords
Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-6
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	lou
2	thait
3	thoam
4	gouth
5	choun
6	boul
7	kaif
8	shoam
9	kaith
10	soath
11	chaith
12	paitch
13	shoathe
14	yoathe
15	clou
16	staif
17	crouse
18	scouth
19	proat
20	fraice
21	shroan
22	craise
23	dwait
24	thwoath
25	smoap
26	snaith
27	snount
28	troung
29	scroul
30	sploan

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-7
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	houch
2	louth
3	mout
4	paim
5	moach
6	jaim
7	youn
8	chait
9	choap
10	goap
11	thaitch
12	choathe
13	whaitch
14	noak
15	stou
16	stoul
17	staim
18	braif
19	proathe
20	dwouth
21	sloat
22	whounge
23	smaice
24	glaitch
25	bloath
26	phroak
27	twaitch
28	swoach
29	prounge
30	scrouse

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] **Set: 1-8**
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	jou
2	douth
3	kouge
4	tait
5	foach
6	joach
7	zaise
8	wout
9	taith
10	yoap
11	whaice
12	woap
13	raitch
14	voam
15	blou
16	trouge
17	plouse
18	hounge
19	smaith
20	cloap
21	shrout
22	froap
23	claise
24	twaif
25	thwoak
26	smoath
27	twaive
28	dwoam
29	strouch
30	scraint

WordDriver-2 Nonwords
Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-9
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	thoul
2	pouge
3	whoan
4	moul
5	noach
6	vait
7	shouch
8	haise
9	houn
10	maith
11	toath
12	woaf
13	chaitch
14	phaitch
15	joathe
16	vount
17	grouth
18	dwouse
19	prail
20	froat
21	bloaf
22	phlaise
23	thwoaf
24	snoaf
25	staint
26	frounge
27	straive
28	sproach
29	spraif
30	splout

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-10
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	thoun
2	woach
3	thwou
4	shouge
5	taise
6	phouge
7	yaif
8	doak
9	shait
10	shoach
11	shaise
12	zoun
13	joal
14	phaive
15	zoak
16	slout
17	graim
18	cloat
19	skoun
20	thwait
21	shoung
22	throap
23	shroath
24	flaith
25	snaif
26	scoath
27	swoak
28	glount
29	splouse
30	spraise

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-11
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	oun
2	vouse
3	pouth
4	whoaf
5	nait
6	zoach
7	boun
8	naise
9	caith
10	jout
11	chaim
12	boaf
13	thoathe
14	kaitch
15	hoathe
16	drouse
17	glouge
18	traif
19	shroul
20	praitch
21	droathe
22	draith
23	snaim
24	floathe
25	phloath
26	praint
27	skount
28	stroan
29	flounge
30	scroak

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-12
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	thoak
2	jouse
3	bouge
4	naice
5	doul
6	moam
7	yaim
8	toul
9	baith
10	choach
11	zoul
12	woam
13	baive
14	yaitch
15	zoathe
16	bloul
17	dwouge
18	groak
19	slaif
20	troathe
21	gloak
22	scaise
23	snait
24	phroaf
25	phloach
26	graint
27	smount
28	phrout
29	sprouth
30	splail

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-13
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	zou
2	thoap
3	houge
4	haice
5	choul
6	yoan
7	zaim
8	roul
9	fout
10	waith
11	woal
12	shaith
13	toaf
14	saitch
15	roathe
16	crouge
17	gloul
18	glail
19	groam
20	snouth
21	throun
22	shrouth
23	spoal
24	shraive
25	swoal
26	dwaim
27	gloathe
28	skoathe
29	claint
30	splait

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-14
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	youse
2	souge
3	moun
4	gaice
5	doach
6	crou
7	jaise
8	gaith
9	foath
10	boam
11	zout
12	roaf
13	whaise
14	laitch
15	noathe
16	droul
17	shrouse
18	graif
19	spouth
20	ploal
21	froaf
22	thraif
23	thwout
24	craitch
25	sloathe
26	skaitch
27	phloap
28	thwaint
29	scrouge
30	scroaf

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-15
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	fouch
2	fouth
3	waim
4	boach
5	shouse
6	jaif
7	whouth
8	chail
9	voan
10	zoath
11	taive
12	snou
13	waitch
14	whoathe
15	voaf
16	brouth
17	tounge
18	shroal
19	twoun
20	blaice
21	scaice
22	swaim
23	scaith
24	dwoat
25	dwoath
26	drount
27	swaint
28	sproal
29	clounge
30	scroat

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-16
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	outh
2	bouse
3	whoap
4	paif
5	drou
6	yail
7	woun
8	thaice
9	moath
10	thaise
11	yoaf
12	foap
13	zaive
14	voap
15	flou
16	cloul
17	counge
18	skouse
19	croal
20	twouch
21	praice
22	shraice
23	shroam
24	swoan
25	swaise
26	phrout
27	scoat
28	twoathe
29	spraith
30	straint

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-17
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	thoaf
2	zouse
3	jouch
4	youge
5	gaif
6	yait
7	woul
8	thoath
9	yaith
10	voul
11	boak
12	hoaf
13	chaive
14	gaitch
15	joam
16	ploun
17	spouch
18	zounge
19	slaice
20	twail
21	froath
22	thwoul
23	braitch
24	bloach
25	twoach
26	spaint
27	flount
28	stroap
29	scroam
30	scraive

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-18
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	loat
2	douch
3	mouge
4	zouge
5	faif
6	thouch
7	zail
8	yoal
9	jaith
10	kout
11	goaf
12	phoap
13	haive
14	jaitch
15	boathe
16	stouse
17	througe
18	boung
19	craice
20	throaf
21	braith
22	phroath
23	gloath
24	phlain
25	twaint
26	grounge
27	stroam
28	straith
29	scrouth
30	sploaf

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-19
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	foat
2	haif
3	bouch
4	nouth
5	thouth
6	gaise
7	phouth
8	loal
9	shaif
10	doath
11	whoach
12	shrou
13	faive
14	jaive
15	voak
16	grouge
17	blouth
18	throul
19	thrain
20	cloam
21	thwaim
22	bloap
23	twoal
24	skaim
25	phlaive
26	twoap
27	snaint
28	spount
29	blounge
30	sproan

WordDriver-2 Nonwords

Focus: Long vowels[/ay/(ai) /oa/(oa) /ow/(ou)] Set: 1-20
(length=30)

ID Code:

Score 60:

Date:

Score Total:

Session ID:

1	pou
2	thoan
3	hain
4	jouth
5	vouge
6	zait
7	phouch
8	foun
9	naith
10	poath
11	goam
12	caitch
13	yaive
14	zoal
15	noaf
16	crouth
17	frouth
18	spoun
19	droak
20	thraive
21	froam
22	swaice
23	skaise
24	dwoach
25	skaint
26	thwount
27	glounge
28	sploal
29	sproam
30	splaive