



Norsk forskningslaboratorium for universell  
utforming, Høgskolen i Gjøvik

# Forskningsprosjekt

Lesbarhet av trykt tekst for svaksynte og  
dyslektikere

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## **Forord**

Universell utforming har blitt satt på dagsorden, og i 2009 fikk vi ny Diskriminerings- og tilgjengelighetslov. Dette betyr også at skreven tekst skal være universelt utformet, og lesbar for så mange som mulig. Loven gjelder for svaksynte og dyslektikere også. Derfor har Deltasenteret gitt Norsk forskningslaboratorium i oppdrag å gjennomføre et litteraturstudium for å kartlegge kunnskapskartet.

Vi takker Deltasenteret for oppdraget.

Gjøvik, 11.04.2013

Jonny Nersveen

Prosjektleder

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## Sammendrag

På oppdrag fra Deltasenteret har Norsk forskningslaboratorium ved Høgskolen i Gjøvik gjort et litteratursøk for å finne litteratur som kan beskrive hvordan trykket tekst bør utføres på papir. Da særlig med hensyn til svaksynte og dyslektikere.

Det er gjort et omfattende søk, med ca 300 treff, men ingen av treffene er av en slik kvalitet at det er mulig å gi generelt svar på hvordan tekst bør utformes mht. svaksynte og dyslektikere. De mest grundige studiene har gjennomgående liten testpopulasjon eller begrenset til spesifikk lidelse.

Litteraturstudien tyder på at omfattende forskning på temaet ikke er utført.

## 1. Innledning

Deltasenteret har gitt Norsk forskningslaboratorium, Høgskolen i Gjøvik, i oppdrag å gjøre et internasjonalt litteratursøk for sammenhengen mellom utforming av tekst og lesbarhet for svaksynte og dyslektikere. Arbeidet skal munne ut i en faglig rapport inneholdende:

- a) Redegjørelse for datainnsamling og kildegrunnlag, hvilke databaser er brukt og hvordan litteratursøk er gjennomført.
- b) Gjennomgang og drøfting av forskning for lesbarhet i trykte dokumenter jf ovennevnte. Det skal spesielt redegjøres for hvilken populasjon studien er gjort på.
- c) Gjennomgang av ulike synsnedsettelse i befolkningen og hvilke føringer som dette gir for valg av visuelt uttrykk.
- d) Litteraturliste

I gjennomgangen kan gjerne tekstutdrag og statistikk fra den gjennomgåtte litteraturen benyttes. Referanser skal oppgis i tråd med oppdragstakers faglige tradisjon.

## 2. Generell teori

### 2.1. Synshemninger

Det finnes flere hundre ulike synshemninger, men de fleste av dem er svært sjeldne. I hht. Norges blindforbund har ca. 160.000 personer i Norge en diagnostisert øyelidelse, og ca. 1.000 personer er helt blinde <sup>i</sup>. Antall personer som er berørt av en synshemning er imidlertid betydelig større.

De synshemningene som er mest utbredt er; grå stær (katarakt), grønn stær (glaukom), RP eller tunnelsyn som mangel kaller den (retinitis pigmentosa), AMD (aldersrelatert makula degenerasjon), diabetes retinopati (blødninger på netthinna forårsaket av diabetes) og albinisme (manglende fotopigment i iris) <sup>ii</sup>.

Grå stær er fordunkling av øyelinsen, slik at noe av lyset spres i selve linsen før det når netthinna. Resultatet er uklart syn. Man regner at så godt som alle mennesker over 70 år mer eller mindre har utviklet grå stær <sup>iii</sup>. Dette tilsvarer ca. 500.000 mennesker.

Ved grønn stær er noen av nervetrådene fra netthinna og inn til synssenteret i hjernen skadet, slik at skadede nervetråder ikke slipper gjennom signaler. Dette fører til at deler av synsfeltet forsvinner permanent. Man regner at ca. 2% av befolkningen over 40 år har grønn stær. Ca. 40.000 har fått diagnose, men mørketallene kan være store <sup>iv</sup>.

Ved AMD er sentralt synsfelt skadet. Lidelsen fører til at linjer buer seg i det sentrale synsfeltet og at sentralt synsfelt blir tåkete, eller delvis eller helt forsvinner. Disse personene må se med sidesynet, som i seg selv har dårlig synsskarphet. Ca. 10 % av alle over 70 år har

mistet lesesyntet på grunn av AMD. Dette utgjør ca. 50.000 mennesker. Totalt antall mennesker som har AMD er betydelig større, og kan være over 100.000 mennesker.

Diabetes retinopati er blødninger på netthinna forårsaket av diabetes. Avhengig av omfanget av blødningene, vil temporære skotom oppstå samt at blodet fører til at øyevæsken blir uklart. Blodårer som lekker, kan gro og øyesystemets renoveringssystem renser øyevæsken. Derfor er ikke denne lidelsen stabil, men varierende i alvorlighetsgrad. I hht. HUNT-undersøkelsen i Nord-Trøndelag er det ca. 370.000 tilfeller av diabetes i Norge <sup>v</sup>. Alle av type I, vil etter hvert utvikle diabetes retinopati, mens ca. 60 % av alle type II, vil utvikle retinopati etter 20 år. Det finnes ingen direkte oversikt over antall personer i Norge, men man må anta at taller kan være over 100.000 tilfeller.

Albinisme er manglende fotopigment melanin. Dette fører til at også iris mangler fotopigment, som igjen fører til at iris slipper gjennom falskt lys inn på netthinna. Dette kan føre til kraftig synsnedsettende blinding. I tillegg eksisterer signalproblem i sentralt synsfelt, som fører til noe redusert visus. Man regner med at ca. 2-300 personer har albinisme eller cortical albinisme(kun synet er berørt) i Norge.

Nystagmus er ufrivillige øyebevegelser, ofte som en følgelidelse til andre synshemninger. Den fører til redusert visus. Nystagmus er ofte en følgelidelse til andre synshemninger. Det finnes ingen offentlig statistikk som gir mulighet til å anslå antall personer.

Synsfeltet i hjernen (visual cortex) kan være skadet etter slag. Skaden kan gi seg utslag på flere måter, men en vanlig effekt er at halve synsfeltet er borte (homonym hemianopsi). Andre effekter er at synsfeltet er flekkvis borte eller at de ikke er riktig sammensatt (neglekt). Det er ca. 15.000 nye slagtilfeller i Norge hvert år, av disse får ca. 60 % synsforstyrrelser <sup>vi</sup>. Hos noen går synsforstyrrelsen tilbake, mens andre får permanente skader. Det er ikke kjent hvor mange totalt som har skadet syn som følge av slag, men tallet ligger nok over 100.000 personer.

Det skal nevnes en synsproblematikk til, som ikke er en øyesykdom. Generell aldring reduserer synet betraktelig. Synet er optimalt ved 10-20 års alderen. Øyelinsen har ingen blodårer, men er et levende objekt. Når celler dør, forblir de i linsen, fordi det ikke eksisterer noe renoveringssystem (blod) som kan frakte cellene bort. Etter hvert gulner linsen. Den blir mer diffust lysgjennomtrengende, dvs. at lyset spres noe i linsen, og mister samtidig noe av sin evne til å slippe gjennom lys. Ved 60 års alder har øyelinsen statistisk sett mistet 60 % av sin evne til å slippe gjennom lys, mens ved 80 års alderen har linsen statistisk sett mistet 79 % av sin evne til å transmittere lys <sup>vii</sup>, når vi sammenlikner med et optimalt øye. Konsekvensen er at med alderen reduseres visus og grensen for fargesyn forflyttes. En 60 år gammel person må statistisk sett ha 2,5 ganger så mye lys for å kompensere for redusert lystransmisjon i linsen, og en 80 år gammel person må statistisk sett ha 4,5 ganger så mye lys for å kompensere for redusert lystransmisjon.

Alle synshemningene som er nevnt her, fører til lesevanskeligheter. Det vi også skal legge merke til er at kravet til en tekst for å oppnå lesbarhet ikke er lik for de forskjellige synshemningene.

## 2.2. Leseferdighet for synshemmede

Det er åpenbart at tekststørrelse, utforming, avstand mellom linjer, avstand mellom ord, luminanskontraster, bakgrunnsfarge og tekst har innvirkning på leseferdighet.

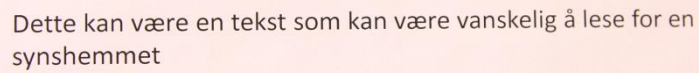
Argumentasjonen er som følger: Vi må kunne skjelle bokstavstreker fra hverandre, vi må kunne skille linjer fra hverandre, vi må kunne skille ord fra hverandre og bokstavene må være synlige mot sin bakgrunn, for at teksten skal være oppfattbar. Det gjelder for alle seende mennesker. I tillegg kommer ytre forhold som belysningen på teksten og belysningen i omgivelsene <sup>viii</sup>. Det er også åpenbart at lesbarheten av en tekst påvirkes av en synshemning i og med at evnen til å oppfatte kontraster og tynne streker kan være svekket.

Synshemninger er et svært vidt begrep. Personer med AMD må lese med sidesynet. Sidesynet har ikke samme synsskarphet som sentralt synsfelt, og personen vil derfor slite med å lese liten og tett skrift, tynne streker og lav luminanskontrast. Personer med langt utviklet RP kan ha problemer med å følge linjen, fordi perifert synsfelt ikke finnes eller er sterkt svekket. Det samme kan gjelde personer med grønn stær (glaukom), hvis skotomet er stort (synsfeltutfall). Personer med RP og grønn stær kan i mange tilfeller lese liten skrift. Deres problem ligger ikke der, men i at de har begrenset synsfelt. For grønn stær kommer dette an på hvor synsutfallet er. Personer med grå stær har fordunkling i øyelinsen. Lyset spres i øyelinsen og avbildningen blir utydelig på netthinna. Disse personene ser utydelig og vil derfor ha problemer med liten tekst, tynne streker og lav luminanskontrast. Personer med albinisme (manglende fotopigment i iris) har svekket sentralsyn samtidig med at lys lekker inn på netthinna gjennom iris, dvs. utenom pupillen. Denne gruppen vil ha problemer med liten skrift og tynne streker. Personer som har synsskader forårsaket av slag, har mistet deler av sitt synsfelt, ofte et av sidesynene. Denne gruppen må delvis lese med sidesynet som har redusert visus. Fordi denne gruppen ser utydelig, får de ofte problemer med liten tekst, tynne streker og lav luminanskontrast. Generell aldring har en viss likhet med grå stær. Fordunkling av øyelinsen medfører redusert visus, men den største utfordringen er å opprettholde fargesynet. Om ikke teksten er i farger, eksisterer som regel illustrasjoner eller bilder i farger. Det er de kaldeste fargene (farger fra grønt til blått) som er vanskeligst å oppfatte for et eldre menneske. Dette skyldes at kalde farger spres mer i øyelinsen enn varme farger (farger fra gult til rødt).

Nystagmus kommer i en særstilling. Dette er ufrivillige øyebevegelser. Nystagmus har ofte sitt opphav i en annen synslidelse som i seg selv gir redusert syn. Ufrivillige øyebevegelser gjør det lett å miste ordet, setningen eller linjen i teksten man leser. Det er ikke teksten som er opphav til de ufrivillige bevegelsene, men det kan være fonter, linjeavstander,

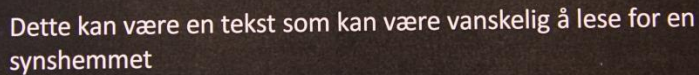
fontstørrelse, etc., som kan ha betydning for hvor lett det er å finne fram til der man var før bevegelsen kom.

Figurene 1 til 12 illustrerer utfordringen synshemmede, med de mest klassiske synshemmingene, har ved å lese. Figur 1 og 2 viser samme tekst med negativ og positiv luminanskontrast.



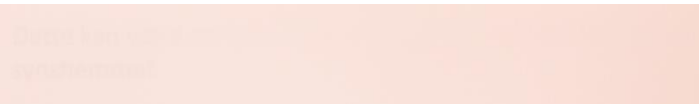
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 1: Tekst med negativ kontrast, sett med normalt syn. Foto: Jonny Nersveen



Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 2: Tekst med positiv kontrast, sett med normalt syn. . Foto: Jonny Nersveen



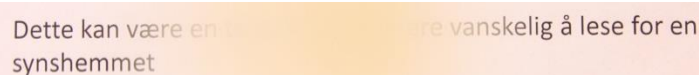
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 3: Tekst med negativ kontrast, sett med godt utviklet grå stær. Foto: Jonny Nersveen.




Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 4: Tekst med positiv kontrast, sett med godt utviklet grå stær. Foto: Jonny Nersveen.



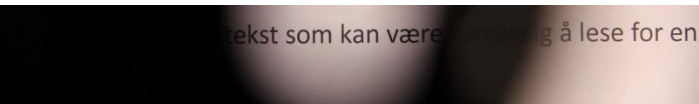
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 5: Tekst med negativ kontrast, sett med AMD. Foto: Jonny Nersveen.



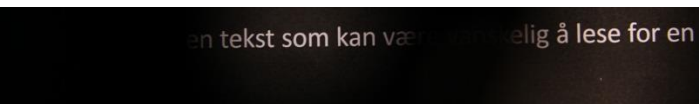
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 6: Tekst med positiv kontrast, sett med AMD. Foto: Jonny Nersveen.



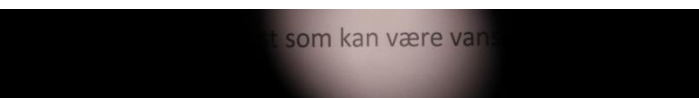
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 7: Tekst med negativ kontrast, sett med grønn stær. Foto: Jonny Nersveen.



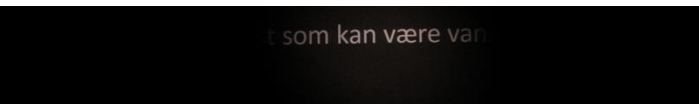
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 8: Tekst med positiv kontrast, sett med grønn stær. Foto: Jonny Nersveen.



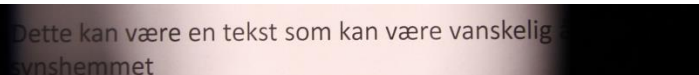
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 9: Tekst med negativ kontrast, sett med langt utviklet RP. Foto: Jonny Nersveen.



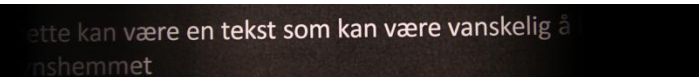
Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 10: Tekst med positiv kontrast, sett med langt utviklet RP. Foto: Jonny Nersveen.



Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 11: Tekst med negativ kontrast, sett med middels utviklet RP. Foto: Jonny Nersveen.



Dette kan være en tekst som kan være vanskelig å lese for en synshemmet

Figur 12: Tekst med negativ kontrast, sett med middels utviklet RP. Foto: Jonny Nersveen.



De fleste mennesker er vant med å lese tekst med mørke bokstaver mot lys bakgrunn. Denne type kontrast kalles negativ luminanskontrast, mens lys tekst mot mørk bakgrunn kalles positiv luminanskontrast. Figur 1 og 2 viser eksempel på hhv. negativ og positiv luminanskontrast. Figur 3 og 4 viser hvordan denne teksten blir oppfattet for en person med langt utviklet grå stær. Legg merke til at når bakgrunnen er lys, oppstår mer spredning av lys i øyelinsa, med det resultat at bildet på netthinna viskes ut. Her er teksten helt usynlig. Derimot kan vi skimte teksten når kontrasten er positiv. Årsaken til dette er at ved mørk bakgrunn, er det mindre lys som spres i øyelinsa, og bildet på netthinna blir noe klarere. Noe tilsvarende er det vi opplever med billys i tåke, der lyset spres i tåka. Blender vi ned, ser vi bedre, fordi det er mindre lys som spres i tåka.

Figur 5 og 6 viser hvordan en person med aldersrelatert makula degenerasjon (AMD) oppfatter teksten. Her er deler av det sentrale synsfeltet borte, mens perifert synsfelt er intakt. Denne gruppen er også normalt en lysømfintlig gruppe, som lett får opplevelse av synsnedsettende blinding. Det er ikke så stor forskjell på figurene, men ofte foretrekker personer med AMD positiv luminanskontrast.

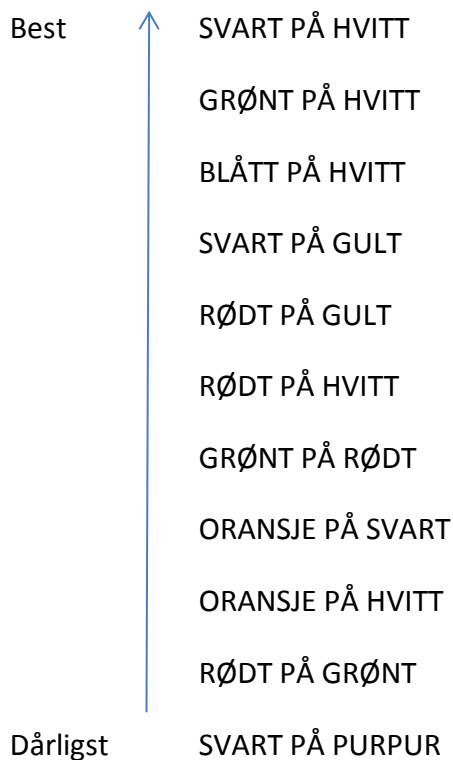
Figur 7 og 8 viser hvordan en person med grønn stær kan oppfatte en tekst. Her er deler av synsfeltet borte, og personen må søke med øynene for å finne teksten. Det vil variere noe med omfanget av synsfeltutfallet, men vi ser at man kan ha en fordel med negativ luminanskontrast.

Figur 9 og 10 viser hvordan en person med langt utviklet RP oppfatter teksten. Synsfeltutfallet er i perifer del av synsfeltet, og ved langt utviklet synsfeltutfall er det bare en liten synsåpning. Personen som skal lese må søke i teksten. Normalt er denne gruppen svært glad i lys, og ønsker derfor mye lys. En studie ved NTNU i Trondheim har vist at ved kraftig økning av lysmengden, øker synsfeltet noe <sup>ix</sup>. Denne gruppen vil profitere på negativ luminanskontrast.

Figur 11 og 12 viser det samme som figur 9 og 10, men med moderat utvikling av synsfeltutfall.

En av de største forskerne innen leseferdighet heter Miles A. Tinker. Han var aktiv forsker innen dette feltet fra 1926 til 1960, og har publisert over 200 forskningsartikler og 7 bøker. Gammelt stoff, kan man mene. Tinkers arbeid danner mye av grunnlaget for dagens forskning på leseferdighet.

Tinker studerte bl.a. bruk av fargekontraster for tekst. I 1931 og 32 ble det publisert et viktig arbeid knyttet opp mot leseferdighet som funksjon av fargekontraster, ofte benevnt som Tinkers fargeskala <sup>x</sup>, <sup>xi</sup>. Listen er kronologisk med beste resultat øverst, og dårligst nederst.



Figur 13: Tinkers fargeskala for lese hastighet <sup>x</sup>.

Denne listen har også vært anbefalt for svaksynte, i både Norge og andre land, med referanse til Tinker. En nærmere gransking av litteraturkilden viser at Tinkers studie ikke omhandlet svaksynte.

Her er en kopi av sammendraget fra den publiserte artikkelen:

“Ten color combinations in addition to black on white were compared with respect to their effect on reading rate. Ten groups of 85 college students each were tested. Striking differences in rate of reading text material printed with various combinations of colored ink and paper were disclosed. The following list gives a rough idea of the findings: Providing good legibility: black on white, grass green on white, luster blue on white, and black on yellow. Providing fair legibility: tulip red on yellow, tulip red on white. Providing poor legibility: grass green on red, chromium orange on black, chromium orange on white, tulip red on green, black on purple. A maximum brightness-contrast between print and background is desirable for greatest legibility.”

Kilde: (PsycINFO Database Record (c) 2006 APA, all rights reserved) (C) 1931 by the American Psychological Association.

Dette betyr ikke at listen er feil, men den er heller ikke dokumentert vitenskapelig i forhold til svaksynte. Vi skal også legge til at testgruppen var unge mennesker. Aldring var ikke en del av studien.

I 2010 gjennomførte undertegnede en undersøkelse i regi av Norges blindeforbund på bl.a. lesbarheten på billettautomater og skilting på Oslo S. Riktignok er denne teksten ikke trykket på ark, billettautomatene er en dataskjerm mens skiltingen er bokstaver preget på skiltene. Vår enkle undersøkelse viste at flere kan lese positiv kontrast enn negativ kontrast <sup>xii</sup>. Dette er i motsetning til den vanlige oppfatning i samfunnet. Personer uten synshemninger foretrekker negativ kontrast, og dette er også vår tradisjon. Tinkers skala støtter egentlig den tradisjonelle oppfatningen. I hht. Tinkers skala kommer negativ luminanskontrast best ut. Positiv kontrast hører til halvparten som kommer dårligst ut. Personer med synshemninger deler seg i to grupper her. Gruppen som ikke har problemer med blinding og som tåler mye lys, vil av naturlige grunner foretrekke negativ luminanskontrast. Gruppen som er lysfølsomme, eksempelvis personer med grå stær og AMD, har mer nytte av positiv luminanskontrast. Her må vi være oppmerksom på at den sistnevnte gruppen er størst. Både grå stær og AMD, tørr tilstand, utvikler seg gradvis. I begynnelsen vil nok negativ luminanskontrast være fordelaktig, men på et stadium vil behovet endre seg.

Tinker har studert både luminanskontraster, ulike farger og fargebakgrunn, fontstørrelser, fontutseende, linjeavstand, osv. Felles for alle disse studiene er at de ikke er knyttet opp mot synsnedsettelse og gjelder i stor grad yngre mennesker. Mange av disse studiene er gjort i 30-40 årene, og er derfor svært gamle. Uansett, de blir henvist til den dag i dag <sup>x, xiii, xiv, xv, xvi, xvii, xviii, xix, xx, xxi, xxii, xxiii</sup>. Det reiser seg to store spørsmål om denne forskningen. Vi kan vel anta at dagens øyne likner på dem som fantes for 70-80 år siden. Så raskt går ikke evolusjonen. Et av de viktige spørsmålene er om forskningsforholdene den gangen var god nok i forhold til dagens standard. Om vi hadde repetert forskningen, ville vi fått samme resultat? Et forhold som er forskjellig er belysningen. Tinkers forskning ut over i 50-årene beveget som mot belysningsproblematikk, spesielt mot belysningsnivåene og flimring. Flimring oppsto i tilknytning til anvendelse av lysrør. På 30-tallet eksisterte ikke lyskilder som flimret. Det var flimmerfrie glødelamper, der fargetemperaturen endret seg avhengig av dimmetilstanden. I dag vet vi at fargetemperaturen påvirker pupillstørrelsen og dermed synsskarpheten, og vi vet at fargetemperaturen har spesiell innflytelse på synshemmede ved at blått gir mer blinding enn rødt lys, og at blått lys er noe man filtrerer bort med filterbriller mange synshemmede bruker. Tinker gjennomførte sine første forsøk med glødelamper, med lav fargetemperatur. I dag finnes knapt nok flimring, fordi moderne lysrør ikke har merkbare flimmerkomponenter, men fordi vi bruker høyere belysningsstyrker enn tidligere bruker vi også høyere fargetemperatur. I Tinkers sine forsøk var nok fargetemperaturen godt under 3000 Kelvin. I dag benyttes fargetemperaturer gjerne over 4000 Kelvin. Dette er en stor forskjell. Det er sannsynlig at nye forsøk kunne gitt andre svar enn det Tinker fant i sin tid.

Det har vært mye diskusjoner rundt fonter og seriffer. Den opprinnelige ideen var at seriffer ga en jevn linjeføring som gjorde det lettere å følge linjen mens man leste. Tinker publiserte i 1963 en artikkel om dette <sup>xxiv</sup>. Forskning på hvordan linjer lagres i hjernen, førte til enda større interesse for seriffer, og man mente at seriffer var en bedre utnyttelse av det visuelle systemet, på grunn av horisontale og vertikale linjer <sup>xxv</sup>. Flere forskere har senere stilt seg

tvilende til denne teorien. Ole Lund ved Høgskolen i Gjøvik, publiserte i 1997 en artikkel i *Typography papers* 2, der han går gjennom forskningen og argumentasjonen for og imot seriffer. Hans konklusjon er at det ikke eksisterer konkrete bevis for at seriffer er bedre enn uten<sup>xxvi</sup>. En helt ny Russisk studie( 2012) med 238 testdeltakere ga samme resultat. Man fant ikke forskjeller på lesehastighet med bokstaver med og uten seriffer. Her skal man selvsagt huske på at benyttet alfabet var Cyrillisk og ikke vårt eget. Likevel er denne studien interessant. Spørsmålet nå er om man kan forvente å finne forskjeller for synshemmede i forhold til normaleseende personer. Ingen av studiene det her refereres til gjelder synshemmede. Spørsmålet blir derfor om synshemmede har større nytte av seriffer enn normaleseende mennesker. Ser man dårlig vil alt som kompliserer utseendet på en bokstav føre til økt risiko for at bokstaven ikke gjenkjennes. Samtidig er det også tenkbart at det er lettere å følge en linje med seriffer, men, da er vi tilbake til samme spekulasjon som gjelder for normaleseende. Man har antatt at det er slik.

### 2.3. Dysleksi

Lese- og skrivevansker kan ha mange årsaker, som konsentrasjonsvansker, manglende språkopplæring, problemer i oppvekst eller generelle lærevansker. Dysleksi skiller seg fra disse ved at det beskrives som spesifikke lese- og skrivevansker, benevnt under det som kalles fonologisk vanske. Fonologien beskriver hvordan lydene forholder seg til språk, og man mener at opphavet ligger i redusert arbeidsminne i hjernen.

Dysleksi kan opptre i ulike varianter, og kan være spesifikk til skrivevanske, mens lesing kan være greit, som motsatt, eller at begge deler er vanskelig. Typiske problemer er at bokstavene bytter plass, forvirring med en eller to konsonanter, at bokstaver utelates i ord, at ord skrives slik de lyder, at det tar lang tid å lese, at bokstavene flytter seg opp eller ned i teksten, vanskelig å uttale lange ord, osv.<sup>xxvii</sup>.

Studier av øyebevegelser hos dyslektikere viser andre og kraftigere øyebevegelser(sakkadiske bevegelser) enn hos normallesende personer. Ordene kan gjerne bli studert flere ganger, og blikket hopper noen ganger bakover i setningen, og også til andre setninger<sup>xxviii</sup>. Det er høyst tenkbart at en tekst som er vanskelig å følge, vil øke disse bevegelsene. Når blikket beveger seg bort fra ordet, og skal finne det tilbake igjen, vil alle forhold som gjøre det lett å søke opp ordet igjen være nyttig. Dette gjelder luminanskontraster, enkel fontdesign, god linjeavstand, etc.. Dette er den samme problemstilling som også finnes hos svaksynte. Jo lettere synlig teksten er, jo raskere vil leseren kunne finne igjen stedet blikket forlot.

Stress og slitenhet er kjent for å påvirke lese- eller skriveferdigheter. I et svensk forskningsprosjekt fra Karolinska instituttet, fant man ikke signifikante forskjeller mellom normalfungerende og dyslektikere i endret leseferdighet under stress. Dette betyr ikke at

stress ikke påvirker dyslektikere, men at dyslektikere ikke reagerer annerledes enn normallesefungerende mennesker. <sup>xxviii</sup>.

Dessverre er det ikke mulig å lage visualiseringer av leseutfordringer slik det er gjort med ulike synshemninger.

### 3. Litteraturstudium

#### 3.1. Metode

Høgskolen i Gjøvik har generell tilgang til et betydelig antall databaser med vitenskapelige publikasjoner. Søk foregår via søkeportaler, der en portal omfatter flere tidsskrifter. Etter at vi har rådført oss med bibliotekjeneren, har vi kommet fram til at søkene bør gjennomføres med søkeportalene:

- PsychInfo
- Science Direct
- Sage Journals

Det legges ingen tidsavgrensninger i søket. Det er også mye gamle studier som nå er lagt inn i de søkbare databasene, men en del kan også mangle. Nyere studier vil alltid foreligge digitalt.

Det vil også bli gjort søk generelt på åpne web-sider.

Det vil bli tatt kontakt med utenlandske institusjoner.

Målet er å finne studier på sammenhenger med utforming av lesbar tekst og synshemninger/dysleksi. Konsekvensen av type synshemninger kan variere svært. Det vi leter etter må følge universell utformings filosofi, at det skal kunne brukes av alle.

Innen synshemninger brukes forskjellige engelske begrep, som low vision, eye disease, eye disorder(s), sight weak, når ikke spesifikke synshemninger er benevnt. Disse brukes som søkeord.

For dysleksi brukes ordet dyslexia som søkeord.

For tekstbeskrivelse brukes søkeordene; printed text/font size, printed text/font type, printed font colour/color, printed background colour/color, printed gap width, printed line space, printed luminance contrast.

Tiresias er en fontfamilie som ble laget direkte for synshemmede. Vi benytter derfor også Tiresias som søkeord.

Søkeordene for tekst kombineres med søkeordene for synshemninger og dysleksi.

## 3.2. Søkeresultat

Utskrift av søkene med beskrivelse av søket og søksresultater er plassert som vedlegg.

Det er rene utskrifter slik de framkommer direkte i søkene som er lagt ved. I noen av resultatene medfølger «highlights», der hovedpunktene i forsøkene er vist. Dette er ikke noe vi har bedt om i vårt søk, men vi har valgt å la den medfølge der den finnes.

I noen søk har vi valgt å ta med «abstract» i søkene, for å belyse artikkelen spesielt. Dette er artikler vi mener kan ha noe mer interesse, dels ut fra at overskriften virket forlokkende eller som en dokumentasjon på at innholdet kanskje ikke stemte med hva overskriften fortalte.

Søkene ga svært få funn. Resultatene er drøftet i diskusjonskapittelet.

## 3. Diskusjon - Konklusjon

Datainnsamlingen har foregått ved søk i søkeportalene PsychInfo, Sage Journals og Science Direct. Valget er gjort i samråd med vår bibliotekstjeneste. Disse tre søkeportalene dekker en betydelig mengde databaser.

Resultatene fra våre søk er nedslående. Søkordene ga litt i underkant av 300 treff. Det er ikke lagt noen begrensninger i bakover i tid søkene gjelder for. Det er gjort variasjoner i søkene, med litt andre ord, uten at det ga flere treff.

Søket har derfor vært svært omfattende. Dette betyr ikke at noen databaser kan ha unnsloppet søket. Uansett, skulle vi fått treff. Det er også kontrollert for søkenavnet «impaired vision» i alle de nevnte databasene, men resultatet er fortsatt det samme.

Av det lille materiale vi har, virker det som om det knapt forskes på lesbarhet av trykt tekst generelt, relatert til svaksynthet eller dysleksi. Forskningen er gjerne knyttet opp mot bestemte lidelser. Forklaringen på dette kan være at forsøkene ville blitt for omfattende eller så grunne at man ikke kan kalle det forskning. Screening av pasienter er svært omfattende, noe som begrenser antall testpersoner. Det gir lite materiale å generalisere på. Det er generalisering som er målet med vårt prosjekt, dvs. å finne en generell måte å trykke på som de aller fleste kan bruke.

I 1981 utga Norges blindforbund heftet *Orienteringshemmet: Blindes og svaksyntes krav til fysisk planlegging - en veileder*<sup>xxix</sup>. Den gang ble det gjennomført et søk for å finne litteratur som kunne større anbefalinger innen trykt tekst. Man fant ikke noe. Heftet ble revidert i 1989, men med samme søkeresultat. I 2004 utga Norges blindforbund boken «Et inkluderende samfunn» av Bjørn Nygård<sup>xxx</sup>. Også da ble det gjort datasøk for å finne fagstoff om forskning på lesbarhet av tekst. Man fant ikke noe. Den gang støttet man seg på John Bings utvikling av fontfamilien Tiresias. Norges blindforbund utga i 2010 publikasjonen «Informasjon for alle. Et hefte om hvordan gjøre tekst på papir, skilt og skjerm tilgjengelig for synshemmede»<sup>xxxi</sup>. På nytt ble det gjort søk på å finne forskningslitteratur om emnet. Resultatet forble

det samme. Våre søk nå har altså gitt samme resultat som tidligere søk utført av andre i et tidsspenn på 30 år. Dette tyder på at generell forskning på lesbarhet av tekst for generell synshemning faktisk ikke er utført. Store internasjonale undersøkelser av så stor viktighet ville vært kjent for Norges blindforbund.

Resultatet for søk på dysleksi og generell lesbarhet av tekst har samme resultat som for synshemninger. Vi har vært i kontakt med Norsk dysleksiforening, for å spørre om råd om litteratursøk. Svaret vi fikk var at foreningen ikke kjente til generell forskning på tekstdesign, og at dette oppfattes som et problem. Vi fikk samme svaret her som fra Norges blindforbund. Forklaringen kan være den samme som for svaksynte.

Det forskes selvsagt på tekstdesign, men mye av denne forskningen er knyttet opp mot webdesign og grafisk bransje generelt. Et av de mer prestisjefylte universitetene på dette området er Reading University i England. De aller fleste treffene i litteraturstudien som er utført kommer fra helsemiljøer. Svært lite kommer fra typografibransjen.

Det hadde vært mulig å gjøre grundigere søk, forsøkt med andre databaser, osv. Det som likevel står igjen er at den grundige forskningen er basert på små populasjoner, og begrenset til spesifikke lidelser. Vi har ikke funnet spor av store undersøkelser av generell art knyttet opp mot svaksynthet eller dysleksi. Hvis slike undersøkelser finnes, ville med stor sannsynlighet handicaporganisasjonene kjent til dem. Vi mener det er grunn til å konkludere med at det ikke er bevist hva slags font, fontstørrelse, bruk av seriffer/ikke seriffer, linjeavstander, etc., man bør bruke generelt for å fange så mange lesere som mulig.

Varianter av de mest tradisjonelle synshemningene er grundig redegjort for i kapittel 2.2. Synshemninger. Det er å bemerke her at det finnes ingen offentlige databaser som gir eksakt beskrivelse av antall personer med synslidelser. Tallene som fremkommer, er hentet fra ulike forskningskilder og tall Norges blindforbund sitter på. Usikkerheten er beskrevet i kapitlet.

Behovene som personer med synshemninger har er svært variert. En gruppe kan ha nytte av en type kontrast, mens dette er negativt for en annen. Vårt forslag er å se på størrelsen på gruppene. Grå stær representerer den betydeligst største gruppen, med en halv million personer. Grå stær likner veldig på den utfordring eldre mennesker har, men fordunkling av øyelinsen. Statistisk sett har et 60 år gammelt øye mistet 60 % av sin transmisjonsevne for lys. Det er nærmere 1 million mennesker i Norge over 60 år. Bare disse to gruppene utgjør 20-25 % av Norges befolkning. De øvrige gruppene med synshemninger representerer betydelig færre personer.

Litteraturlisten i kapittel 6 gjelder kun for litteratur benyttet under utarbeidelse av teorikapitlet. Litteraturen som har kommet opp i litteratursøkene har sin fullstendige kildeanvisning i kapitlet.

#### **4. Forslag til videre arbeid**

Med bakgrunn i resultatene fra dette arbeidet, mener vi man bør søke å etablere et større forskningsprosjekt i stor skala. Det arbeides derfor med å etablere et større prosjekt i denne sammenheng.



## Vedlegg

### Søk på svaksynthet

#### *Følgende treff er gjort i databasen PsychInfo:*

Database: Journals@Ovid Full Text <April 02, 2013>, HiG - Høgskolen i Gjøvik Journals@Ovid Full Text, AMED (Allied and Complementary Medicine) <1985 to March 2013>, Embase <1974 to 2013 April 02>, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>, Ovid MEDLINE(R) Daily Update <April 02, 2013>, Ovid OLDMEDLINE(R) <1946 to 1965>, Ovid Nursing Database <1946 to March Week 3 2013>, PsycINFO <1806 to March Week 4 2013>

Search Strategy:

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1 ("low vision" or "eye disease" or "eye disorder" or "sight weak") and ("printed font size" or "printed text" or "printed font type" or "printed colour " or "printed background colour" or "printed gap width or printed line space og printed luminance" or " printed contrast").mp. [mp=ti, ab, tx, ct, sh, hw, tn, ot, dm, mf, dv, kw, nm, kf, ps, rs, an, ui, dw, tc, id, tm] (106)

2 remove duplicates from 1 (64)

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1.

Journals@Ovid Full Text Psychometric Analyses to Improve the Dutch ICF Activity Inventory.

Bruijning, Janna E. \*; van Rens, Ger +; Knol, Dirk ++; van Nispen, Ruth ++

Optometry & Vision Science.

[Article.] [Original Article: PDF Only]

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Publish Ahead of Print, POST EDITOR CORRECTIONS, 20 March 2013

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Kempen, John H MD, PhD [S][//]; Ronald, Allan MD, PhD #\*\*; Sande, Merle MD, PhD [P];  
Katabira, Elly MBChB, MMed, Medicine \*

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Bruijning, Janna E. \*; van Rens, Ger +; Knol, Dirk ++; van Nispen, Ruth ++

Optometry & Vision Science.

[Article.] [Original Article: PDF Only]

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AN: 00006324-201210000-00022.

28.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Impact of Simulated Central Scotomas on  
Visual Search in Natural Scenes.

McIlreavy, Lee \*; Fiser, Jozsef +; Bex, Peter J. +

Optometry & Vision Science. 89(9):1385-1394, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00021.

29.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Effects of Contour Enhancement on Low-Vision Preference and Visual Search.

Satgunam, PremNandhini \*; Woods, Russell L. +; Luo, Gang ++; Bronstad, P. Matthew ++; Reynolds, Zachary [S]; Ramachandra, Chaithanya ||; Mel, Bartlett W. ++; Peli, Eli [P]

Optometry & Vision Science. 89(9):E1364-E1373, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00019.

#### Abstract

**AB Purpose.** To determine whether image enhancement improves visual search performance and whether enhanced images were also preferred by subjects with vision impairment. **Methods.** Subjects ( $n = 24$ ) with vision impairment (vision: 20/52 to 20/240) completed visual search and preference tasks for 150 static images that were enhanced to increase object contours' visual saliency. Subjects were divided into two groups and were shown three enhancement levels. Original and Medium enhancements were shown to both groups. High enhancement was shown to group 1, and Low enhancement was shown to group 2. For search, subjects pointed to an object that matched a search target displayed at the top left of the screen. An "integrated search performance" measure (area under the curve of cumulative correct response rate over search time) quantified performance. For preference, subjects indicated the preferred side when viewing the same image with different enhancement levels on side-by-side high-definition televisions. **Results.** Contour enhancement did not improve performance in the visual search task. Group 1 subjects significantly ( $p < 0.001$ ) rejected the High enhancement, and showed no preference for Medium enhancement over the Original images. Group 2 subjects significantly preferred ( $p < 0.001$ ) both the Medium and the Low enhancement levels over Original. Contrast sensitivity was correlated with both preference and performance; subjects with worse contrast sensitivity performed worse in the search task ( $[\rho] = 0.77, p < 0.001$ ) and preferred more enhancement ( $[\rho] = -0.47, p = 0.02$ ). No correlation between visual search performance and enhancement preference was found. However, a small group of subjects ( $n = 6$ ) in a narrow range of mid-contrast sensitivity performed better with the enhancement, and most ( $n = 5$ ) also preferred the enhancement. **Conclusions.** Preferences for image enhancement can be dissociated from search performance in people with vision impairment. Further investigations are needed to study the relationships between preference and performance for a narrow range of mid-contrast sensitivity where a beneficial effect of enhancement may exist. (C) 2012 American Academy of Optometry

30.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Torsional Anomalous Retinal Correspondence Effectively Expands the Visual Field in Hemianopia.

Satgunam, PremNandhini \*; Peli, Eli +

Optometry & Vision Science. 89(9):E1353-E1363, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00018.

31.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Use of Prescribed Optical Devices in Age-Related Macular Degeneration.

DeCarlo, Dawn K. \*; McGwin, Gerald Jr. +; Searcey, Karen ++; Gao, Liyan [S]; Snow, Marsha [P]; Stevens, Lynne | |; Owsley, Cynthia [S]

Optometry & Vision Science. 89(9):1336-1342, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00016.

32.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Dependence of Reading Speed on Letter Spacing in Central Vision Loss.

Chung, Susana T. L. \*,+,++

Optometry & Vision Science. 89(9):1288-1298, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00011.

33.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Text Accessibility by People with Reduced Contrast Sensitivity.

Crossland, Michael D. \*,+; Rubin, Gary S. \*

Optometry & Vision Science. 89(9):1276-1281, September 2012.

[Article.] [Original Articles]

AN: 00006324-201209000-00009.

#### Abstract

**AB Purpose.** Contrast sensitivity is reduced in people with eye disease, and also in older adults without eye disease. In this article, we compare contrast of text presented in print and digital formats with contrast sensitivity values for a large cohort of subjects in a population-based study of older adults (the Salisbury Eye Evaluation). **Methods.** Contrast sensitivity values were recorded for 2520 adults aged 65 to 84 years living in Salisbury, Maryland. The proportion of the sample likely to be unable to read text of different formats (electronic books, newsprint, paperback books, laser print, and LED computer monitors) was calculated using published contrast reserve levels required to perform spot reading, to read with fluency, high fluency, and under optimal conditions. **Results.** One percent of this sample had contrast sensitivity less than that required to read newsprint fluently. Text presented on an LED computer monitor had the highest contrast. Ninety-eight percent of the sample had contrast sensitivity sufficient for high fluent reading of text (at least 160 words/min) on a monitor. However, 29.6% were still unlikely to be able to read this text with optimal fluency. **Conclusions.** Reduced contrast of print limits text accessibility for many people in the developed world. Presenting text in a high-contrast format, such as black laser print on a white page, would increase the number of people able to access such information. Additionally, making text available in a format that can be presented on an LED computer monitor will increase access to written documents. (C) 2012 American Academy of Optometry.

34.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Practice Patterns and Opinions in the Management of Recurrent or Chronic Herpes Zoster Ophthalmicus.

Sy, Aileen BA \*; McLeod, Stephen D. MD \*,+; Cohen, Elisabeth J. MD ++; Margolis, Todd P. MD, PhD \*,+; Mannis, Mark J. MD [S]; Lietman, Thomas M. MD \*,+; Acharya, Nisha R. MD, MS \*,+

Cornea. 31(7):786-790, July 2012.

[Article.] [Clinical Science]

AN: 00003226-201207000-00013.

35.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Precise Thickness Measurements of Bowman's Layer, Epithelium, and Tear Film.

Schmoll, Tilman \*; Unterhuber, Angelika \*; Kolbitsch, Christoph +; Le, Tuan \*; Stingl, Andreas +; Leitgeb, Rainer \*

Optometry & Vision Science. 89(5):E795-E802, May 2012.

[Article.] [Imaging and Measurement of the Anterior Eye: Original Articles]

AN: 00006324-201205000-00031.

36.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Low Vision Rehabilitation Plans Comparing Two Intake Methods.

Bruijning, Janna \*; van Nispen, Ruth +; Knol, Dirk +; van Rens, Ger ++

Optometry & Vision Science. 89(2):203-214, February 2012.

[Article.] [Original Article]

AN: 00006324-201202000-00013.

37.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Pulmonary Artery Involvement and Associated Lung Disease in Behcet Disease: A Series of 47 Patients.

Seyahi, Emire MD; Melikoglu, Melike MD; Akman, Canan MD; Hamuryudan, Vedat MD; Ozer, Harun MD; Hatemi, Gulen MD; Yurdakul, Sebahattin MD; Tuzun, Hasan MD; Oz, Buge MD; Yazici, Hasan MD

Medicine. 91(1):35-48, January 2012.

[Article.] [Original Study]

AN: 00005792-201201000-00005.

38.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text EARLY NEURAL AND VASCULAR CHANGES IN THE ADOLESCENT TYPE 1 AND TYPE 2 DIABETIC RETINA.

Bronson-Castain, Kevin W PhD \*; Bearnse, Marcus A Jr PhD \*; Neuville, Jessica OD \*; Jonasdottir, Soffia MD +; King-Hooper, Barbara MSCN +; Barez, Shirin MD \*; Schneck, Marilyn E PhD \*; Adams, Anthony J PhD \*

Retina. 32(1):92-102, January 2012.

[Article.] [Original Study]

AN: 00006982-201201000-00014.

39.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Modelling the impact on avoidable cardiovascular disease burden and costs of interventions to lower SBP in the England population.

Dodhia, Hiten a; Phillips, Karen b; Zannou, Maria-Irini c; Airoidi, Mara c; Bevan, Gwyn c

Journal of Hypertension. 30(1):217-226, January 2012.

[Article.] [Original papers: Cost-effectiveness analyses]

AN: 00004872-201201000-00030.

40.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Severe Congenital Toxoplasmosis in the United States: Clinical and Serologic Findings in Untreated Infants.

Olariu, Tudor Rares MD, PhD \*,+; Remington, Jack S. MD \*,+; McLeod, Rima MD ++,[S]; Alam, Ambereen MD [S],[P]; Montoya, Jose G. MD \*,+

Pediatric Infectious Disease Journal. 30(12):1056-1061, December 2011.

[Article.] [Original Studies]

AN: 00006454-201112000-00010.

41.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Abandonment of Low-Vision Devices in an Outpatient Population.

Dougherty, Bradley E. \*; Kehler, K. Bradley +; Jamara, Richard +; Patterson, Nicole +; Valenti, Denise +; Vera-Diaz, Fuensanta A. ++

Optometry & Vision Science. 88(11):1283-1287, November 2011.

[Article.] [Original Article]

AN: 00006324-201111000-00005.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text

42.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text A PILOT STUDY OF NORMATIVE DATA FOR MACULAR THICKNESS AND VOLUME MEASUREMENTS USING CIRRUS HIGH-DEFINITION OPTICAL COHERENCE TOMOGRAPHY.

Liu, Tiffany BS; Hu, Allen Y MD; Kaines, Andrew MD; Yu, Fei PhD; Schwartz, Steven D MD; Hubschman, Jean-Pierre MD

Retina. 31(9):1944-1950, October 2011.

[Article.] [Original Study]

AN: 00006982-201110000-00028.

43.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text A SYSTEMATIC REVIEW OF THE ADVERSE EVENTS OF INTRAVITREAL ANTI-VASCULAR ENDOTHELIAL GROWTH FACTOR INJECTIONS.

Van der Reis, Margriet I MD \*; La Heij, Ellen C MD, PhD \*; De Jong-Hesse, Yvonne MD +; Ringens, Peter J MD, PhD +; Hendrikse, Fred MD, PhD \*; Schouten, Jan S A G MD, PhD \*

Retina. 31(8):1449-1469, September 2011.

[Review.] [Review Article]

AN: 00006982-201109000-00002.

44.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Increased Expression of Hepcidin and Toll-Like Receptors 8 and 10 in Viral Keratitis.

Mohammed, Imran BPharm, MSc, PhD \*; Abedin, Asiya FRCS Ophth (Ed) \*; Tsintzas, Kostas PhD +; Abedin, Syed A MRCS (Eng) ++; Otri, Ahmad M MD \*; Hopkinson, Andrew PhD \*; Mathew, Manu MRCOphth \*; Dua, Harminder S MD, PhD \*

Cornea. 30(8):899-904, August 2011.

[Miscellaneous Article.] [Basic Investigation]

AN: 00003226-201108000-00010.

45.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Update on Geographic Atrophy in Age-Related Macular Degeneration.

Biarnes, Marc \*; Mones, Jordi +; Alonso, Jordi ++; Arias, Luis ++

Optometry & Vision Science. 88(7):881-889, July 2011.

[Review.] [Review]

AN: 00006324-201107000-00017.



46.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Presumed Cytomegalovirus Retinitis in Human Immunodeficiency Virus Type I-infected South African Children.

O'Connell, Natasha MB ChB, MRCPCH, FCPaed \*; Freeman, Nicola MB ChB, FCOphth +; Rabie, Helena MB ChB, MMed, FCPaed \*; Cotton, Mark F. MB ChB, MMed, FCPaed, PhD \*

Pediatric Infectious Disease Journal. 30(6):539-540, June 2011.

[Report.] [Brief Reports]

AN: 00006454-201106000-00026.

47.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Myopia: Proceedings of the 13th International Conference.

Schaeffel, Frank \*; Feldkaemper, Marita \*

Optometry & Vision Science. 88(3):395-403, March 2011.

[Report.] [IMC Conference Program]

AN: 00006324-201103000-00009.

48.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Risk Factors for Physical Discomfort in Australian Optometrists.

Long, Jennifer \*; Naduvilath, Thomas J. +; Hao, Ling (Eileen) ++; Li, Annie ++; Ng, Weixiang ++; Yip, Wesley ++; Stapleton, Fiona [S]

Optometry & Vision Science. 88(2):317-326, February 2011.

[Article.] [Original Article]

AN: 00006324-201102000-00020.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text

49.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Visual Field Size Criteria for Mobility Rehabilitation Referral.

Lovie-Kitchin, Jan E. \*; Soong, Grace P. \*; Hassan, Shirin E. \*; Woods, Russell L. \*

Optometry & Vision Science. 87(12):E948-E957, December 2010.

[Article.] [Original Article]

AN: 00006324-201012000-00006.

50.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Derivation of the Acceptance and Self-Worth Adjustment Scale.

Tabrett, Daryl R. \*; Latham, Keziah +

Optometry & Vision Science. 87(11):899-907, November 2010.

[Article.] [Original Article]

AN: 00006324-201011000-00015.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text

51.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Genetic variability in complement activation modulates the systemic inflammatory response syndrome in children \*.

Agbeko, Rachel S. MD, FRCPCH; Fidler, Katy J. MBBS, MRCP, PhD; Allen, Meredith L. MBBS, FRACP, PhD; Wilson, Peter MD; Klein, Nigel J. MBBS, MRCP, FRCPCH, PhD; Peters, Mark J. MRCP, FRCPCH, PhD

Pediatric Critical Care Medicine. 11(5):561-567, September 2010.

[Article.] [Feature Articles]

AN: 00130478-201009000-00003.

52.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Revenue-Based Cost Assignment: A Potent but Hidden Threat to the Survival of the Multispecialty Medical Practice.

Cooper, Robin MBA, DBA; Kramer, Theresa R. MD, MBA

Academic Medicine. 85(3):538-547, March 2010.

[Miscellaneous.] [Institutional Issues]

AN: 00001888-201003000-00036.

53.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Clinical Inertia in Depression Treatment.

Henke, Rachel M. PhD \*; Zaslavsky, Alan M. PhD +; McGuire, Thomas G. PhD +; Ayanian, John Z. MD, MPP +; Rubenstein, Lisa V. MD, MSPH ++[S]

Medical Care. 47(9):959-967, September 2009.

[Article.] [Original Article]

AN: 00005650-200909000-00005.

54.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Detection and Management of Depression in Patients with Vision Impairment.

Fenwick, Eva K. \*; Lamoureux, Ecosse L. +; Keeffe, Jill E. ++; Mellor, David ++; Rees, Gwyn +

Optometry & Vision Science. 86(8):948-954, August 2009.

[Article.] [Original Article]

AN: 00006324-200908000-00006.

55.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Clinical and Laboratory Evaluation of Peripheral Prism Glasses for Hemianopia.

Giorgi, Robert G. \*; Woods, Russell L. +; Peli, Eli ++

Optometry & Vision Science. 86(5):492-502, May 2009.

[Article.] [Original Article]

AN: 00006324-200905000-00011.

56.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text AGE-RELATED EYE DISEASES: A Review of Current Treatment and Recommendations for Low-Vision Aids.

YOUNG, JUDITH S. MLS

Home Healthcare Nurse. 26(8):464-471, September 2008.

[Article.] [Article]

AN: 00004045-200809000-00008.

57.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Sensory Impairment in Older Adults: Part 2: Vision Loss.

Whiteside, Meredith M. OD, FAAO; Wallhagen, Margaret I. PhD, APRN,BC, GNP, AGSF; Pettengill, Elaine PhD, RN

AJN, American Journal of Nursing. 106(11):52-61, November 2006.

[Article.] [FEATURE]

AN: 00000446-200611000-00019.

Abstract

AB While changes in vision are a normal part of aging, regular assessment and the use of assistive devices can keep older adults active and independent. Overview: A decline in vision occurs naturally with age; more severe impairment can result from medical conditions such as age-related macular degeneration, cataracts, glaucoma, and diabetic retinopathy. Nurses can pick up signs of visual impairment and suggest certain environmental modifications to prevent injury, such as keeping floors free of clutter and rooms well lit. Although assistive technologies such as optical devices, magnifiers, telescopes, and electronic magnification can help, some forms of impairment, such as that caused by cataracts and uncorrected refractive error, can be corrected. (C) 2006 Lippincott Williams & Wilkins, Inc.

58.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Beating the Beat: Reading Can Be Faster Than the Frequency of Eye Movements in Persons With Congenital Nystagmus.

WOO, STANLEY OD, MS, FAAO; BEDELL, HAROLD E. PhD, FAAO

Optometry & Vision Science. 83(8):E559-E571, August 2006.

[Article.] [Original Article]

AN: 00006324-200608000-00009.

59.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Reading Speed Benefits from Increased Vertical Word Spacing in Normal Peripheral Vision.

CHUNG, SUSANA T. L. MScOptom, PhD, FAAO

Optometry & Vision Science. 81(7):525-535, July 2004.

[Article.] [ARTICLES: ORIGINAL ARTICLE]

AN: 00006324-200407000-00014.

#### Abstract

AB Purpose. Crowding, the adverse spatial interaction due to proximity of adjacent targets, has been suggested as an explanation for slow reading in peripheral vision. The purposes of this study were to (1) demonstrate that crowding exists at the word level and (2) examine whether or not reading speed in central and peripheral vision can be enhanced with increased vertical word spacing. Methods. Five normal observers read aloud sequences of six unrelated four-letter words presented on a computer monitor, one word at a time, using rapid serial visual presentation (RSVP). Reading speeds were calculated based on the RSVP exposure durations yielding 80% correct. Testing was conducted at the fovea and at 5[degrees] and 10[degrees] in the inferior visual field. Critical print size (CPS) for each observer and at each eccentricity was first determined by measuring reading speeds for four print sizes using unflanked words. We then presented words at 0.8x or 1.4x CPS, with each target word flanked by two other words, one above and one below the target word. Reading speeds were determined for vertical word spacings (baseline-to-baseline separation between two vertically separated words) ranging from 0.8x to 2x the standard single-spacing, as well as the unflanked condition. Results. At the fovea, reading speed increased with vertical word spacing up to about 1.2x to 1.5x the standard spacing and remained constant and similar to the unflanked reading speed at larger vertical word spacings. In the periphery, reading speed also increased with vertical word spacing, but it remained below

the unflanked reading speed for all spacings tested. At 2x the standard spacing, peripheral reading speed was still about 25% lower than the unflanked reading speed for both eccentricities and print sizes. Results from a control experiment showed that the greater reliance of peripheral reading speed on vertical word spacing was also found in the right visual field. Conclusions. Increased vertical word spacing, which presumably decreases the adverse effect of crowding between adjacent lines of text, benefits reading speed. This benefit is greater in peripheral than central vision. (C) 2004 American Academy of Optometry

60.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text NEW PRODUCTS.

Optometry & Vision Science. 81(2):69, February 2004.

[Miscellaneous.] [NEW PRODUCTS]

AN: 00006324-200402000-00003.

61.

HiG - Høgskolen i Gjøvik Journals@Ovid Full Text Who's on First?

Bullimore, Mark A.

Optometry & Vision Science. 77(7):333-334, July 2000.

[Editorial.] [EDITORIAL]

AN: 00006324-200007000-00001.

62.

The first printed text on ophthalmology. <Primeros textos impresos sobre oftalmologia.>

Esteban Garcia-Alcolea E.

Embase Archivos de la Sociedad Espanola de Oftalmologia. 84 (2) (pp 109-110), 2009. Date of Publication: February 2009.

[Journal: Article]

AN: 19253182

Publisher Sociedad Espanola de Oftalmologia

63.

Fixational eye movements during reading in visually impaired persons.

Maeda F.

Embase Folia Ophthalmologica Japonica. 55 (8) (pp 605-609), 2004. Date of Publication: August 2004.

[Journal: Conference Paper]

AN: 2004454484

Publisher Association of Folia Ophthalmologica Japonica

64.

Reading with magnifiers.

Den Brinker B.P.L.M., Beek P.J.

Embase Ergonomics. 39 (10) (pp 1231-1248), 1996. Date of Publication: October 1996.

[Journal: Review]

AN: 1996317512

Publisher Taylor & Francis Ltd (London, United Kingdom)

Søk på:

(tiresias and ("low vision" or "eye diseas" or "eye disorder" or "sight weak"))).

1.

Journals@Ovid Full Text The effect of font and line width on reading speed in people with mild to moderate vision loss.

Rubin, Gary S. 1,2; Feely, Mary 1; Perera, Sylvie 3; Ekstrom, Katherin 3; Williamson, Elizabeth 4

Ophthalmic & Physiological Optics. 26(6):545-554, November 2006.

[Article.] [Original Article]

AN: 00006377-200611000-00002.

Abstract:

AB Purpose: The aim of this study was to evaluate the effects of print size, typeface, and line width on reading speed in readers with mild to moderate sight problems. Methods: A total

of 43 patients, most of whom had mild cataract or glaucoma with acuity 6/30 or better (median age = 72; range = 24-88 years), read aloud a selection of texts presented randomly in four sizes (10, 12, 14 and 16 point), for each of four typefaces [Foundry Form Sans (FFS), Helvetica (HV), Tiresias PCfont (TPC), Times New Roman (TNR)] at a standard line width of 70 characters and a viewing distance of 40 cm. A subset of letter sizes and typefaces were tested at two additional line widths (35, 90). Results: As expected, reading speed increased with print size from a median of 144 words min<sup>-1</sup> for 10-point text to 163 words min<sup>-1</sup> for 16-point text (repeated measures ANOVA,  $p < 0.0001$ ). There was also a significant effect of typeface with TPC being read about 8 words min<sup>-1</sup> faster, on average, than the other fonts (159 words min<sup>-1</sup> for TPC vs 151 words min<sup>-1</sup> for the other fonts,  $p < 0.0001$ ). However fonts of the same nominal point size were not equivalent in actual size. When adjusted for the actual horizontal and vertical space occupied, the advantage of TPC was eliminated. There was no effect of line width ( $p > 0.3$ ). Data from the present study were extrapolated to the general population over age 65. This extrapolation indicated that increasing minimum print size from 10 points to 16 points would increase the proportion of the population able to read fluently (>85 words min<sup>-1</sup>) from 88.0% to 94.4%. Conclusion: This study shows that line width and typeface have little influence on reading speed in people with mild to moderate sight problems. Increasing the minimum recommended print size from 10 points to 14 or 16 points would significantly increase the proportion of the population able to read fluently. Copyright (C) 2006 Blackwell Publishing Ltd.

2.

Journals@Ovid Full Text Low-Vision Reading Speed: Influences of Linguistic Inference and Aging.

SASS, SARAH M. BA \*; LEGGE, GORDON E. PhD; LEE, HYE-WON PhD

Optometry & Vision Science. 83(3):166-177, March 2006.

[Article.] [Articles: Original Article]

AN: 00006324-200603000-00010.

Abstract:

AB Purpose. Reading is a dynamic task involving both linguistic and visual analysis. In this study, we asked how two types of linguistic information-characters used in segmenting words from one another, and sentence context-differ in their usefulness for people with normal and low vision. Given evidence for age-related differences in some forms of cognitive processing, we also investigated the effect of age. Methods. There were four groups of 10 participants: vision status (normal, low) crossed with age (young, <35 years; old, >65 years). Reading speeds were compared for regularly spaced text and text in which the spaces were removed, a manipulation intended to eliminate local cues for text segmentation and force



attention to clusters of letters or whole words. We also evaluated the effect of sentence context by comparing reading speeds for regular sentences and sentences in which word order was scrambled. Results. Removal of spaces had a greater impact on low vision than normal vision, reducing average speeds to 45% and 66% of speeds for regularly spaced text, respectively. We interpret this to mean that people with low vision have less access to spatially distributed linguistic regularities of text such as prefixes, suffixes, or word length. Removal of sentence context through scrambling had a greater impact on normal vision than low vision, reducing mean reading speed to 53% and 66%, respectively. Finally, comparison of our young and old readers showed no major differences in the use of sentence context or in the impact of removing spaces between words. Conclusions. People with low vision appear to rely more on spacing information in sentences, whereas people with normal vision appear to make better use of sentence context, irrespective of age. (C) 2006 American Academy of Optometry

3.

Journals@Ovid Full Text Measurement of indirect costs for people with vision impairment.

Chou, Shiao-Lan MCom 1; Misajon, RoseAnne PhD 1; Gallo, Jayne MPPM 2; Keeffe, Jill E PhD 1

Clinical & Experimental Ophthalmology. 31(4):336-340, August 2003.

[Report.] [Rapid Research Reports from the Ninth Australian Ophthalmic and Visual Science Meeting: Clinical and Epidemiological]

AN: 00128857-200308000-00012.

4.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Low-Vision Reading Speed: Influences of Linguistic Inference and Aging.

SASS, SARAH M. BA \*; LEGGE, GORDON E. PhD; LEE, HYE-WON PhD

Optometry & Vision Science. 83(3):166-177, March 2006.

[Article.] [Articles: Original Article]

AN: 00006324-200603000-00010.

5.

The effect of font and line width on reading speed in people with mild to moderate vision loss.

Rubin G.S., Feely M., Perera S., Ekstrom K., Williamson E.

Embase

Ophthalmic and Physiological Optics. 26 (6) (pp 545-554), 2006. Date of Publication: November 2006.

[Journal: Article]

AN: 2006510433

Publisher

Blackwell Publishing Ltd

Abstract:

AB Purpose: The aim of this study was to evaluate the effects of print size, typeface, and line width on reading speed in readers with mild to moderate sight problems. Methods: A total of 43 patients, most of whom had mild cataract or glaucoma with acuity 6/30 or better (median age = 72; range = 24-88 years), read aloud a selection of texts presented randomly in four sizes (10, 12, 14 and 16 point), for each of four typefaces [Foundry Form Sans (FFS), Helvetica (HV), Tiresias PCfont (TPC), Times New Roman (TNR)] at a standard line width of 70 characters and a viewing distance of 40 cm. A subset of letter sizes and typefaces were tested at two additional line widths (35, 90). Results: As expected, reading speed increased with print size from a median of 144 words min<sup>-1</sup> for 10-point text to 163 words min<sup>-1</sup> for 16-point text (repeated measures anova,  $p < 0.0001$ ). There was also a significant effect of typeface with TPC being read about 8 words min<sup>-1</sup> faster, on average, than the other fonts (159 words min<sup>-1</sup> for TPC vs 151 words min<sup>-1</sup> for the other fonts,  $p < 0.0001$ ). However fonts of the same nominal point size were not equivalent in actual size. When adjusted for the actual horizontal and vertical space occupied, the advantage of TPC was eliminated. There was no effect of line width ( $p > 0.3$ ). Data from the present study were extrapolated to the general population over age 65. This extrapolation indicated that increasing minimum print size from 10 points to 16 points would increase the proportion of the population able to read fluently (>85 words min<sup>-1</sup>) from 88.0% to 94.4%. Conclusion: This study shows that line width and typeface have little influence on reading speed in people with mild to moderate sight problems. Increasing the minimum recommended print size from 10 points to 14 or 16 points would significantly increase the proportion of the population able to read fluently. 2006 The College of Optometrists.

Kommentarer til søk i PsychInfo

Første søk gav 106 responser, men ved filtrering av mulige doble resultater, endte i 64 treff.

Det er en viss variasjon i resultatene. De aller fleste treffene gjelder optometriske studier knyttet til bestemte synslidelser. I noen av funnene er sammendraget av studien tatt med her. Dette for å viser at selv om overskriften kan virke forlokkende, er gjerne selve studien ikke så interessant for vårt fokus.

I ett tilfelle fokuseres på lesbarhet, men det gjelder for normalseende personer. Funnet her viser at linjeavstand gir økt lesbarhet opp til 1,5 standard avstand. I beste fall vil dette også gjelde for synshemmede, men sannsynlighet er vel at denne gruppen ville profitert på enda lenger avstand.

Bruk av søkeordet Tiresias gav mer nyanserte treff. 5 artikler ble funnet. Tre av dem var aktuelle, men for dem alle er populasjonen for lav til at det kan genereres generelle regler for alle synshemmede.

***Følgende funn er gjort i databasen Sage Journals:***

Your search criteria: "*low vision*" and "*printed font size*" in all fields or "*eye disorder*" and "*printed font size*" in all fields or "*eye disease*" and "*printed font size*" in all fields or "*sight weak*" and "*printed font size*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Results 1-10 of 10 found for "*low vision*" and "*printed text*" in all fields or "*eye disorder*" and "*printed text*" in all fields or "*eye disease*" and "*printed text*" in all fields or "*sight weak*" and "*printed text*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to me.

1.

Text Legibility and the Letter Superiority Effect

James E. Sheedy,

Manoj V. Subbaram,

Aaron B. Zimmerman,

and John R. Hayes

*Human Factors: The Journal of the Human Factors and Ergonomics Society, Winter 2005; vol. 47, 4: pp. 797-815.*

2.

A comparison between reading from paper and computer screen by children with a visual impairment

Graeme Douglas,

Effrosyne Kellami,

Rachel Long,

Irene Hodgetts,

and Graeme Douglas

*British Journal of Visual Impairment, January 2001; vol. 19, 1: pp. 29-34.*

3.

The Use of Telecommunication to Deliver Services to Rural and Urban Vocational Rehabilitation Clients

Catherine Ipsen,

Bethany Rigles,

Nancy Arnold,

and Tom Seekins

*Rehabilitation Counseling Bulletin, April 2012; vol. 55, 3: pp. 144-155., first published on January*

4.

The Potential for Multi-Modal Approaches to Reading for Students With Disabilities as Found in State Reading Standards

Christopher Johnstone,

Martha Thurlow,

Sandra Thompson,

and Ann T. Clapper

*Journal of Disability Policy Studies, March 2008; vol. 18, 4: pp. 219-229.*

5.

Microsoft Windows XP® Accessibility Features

Tom Atkinson,

Jerry Neal,

and Marilyn Grechus

*Intervention in School and Clinic, January 2003; vol. 38, 3: pp. 177-180.*

6.

The oral reading errors of partially sighted children

Gianetta Corley and

Linda Pring

*British Journal of Visual Impairment, March 1993; vol. 11, 1: pp. 24-27.*

7.

Talking TMAP: Automated generation of audio-tactile maps using Smith-Kettlewell's TMAP software

Joshua A. Miele,

Steven Landau,

and Deborah Gildden

*British Journal of Visual Impairment, May 2006; vol. 24, 2: pp. 93-100.*

8.

How non-visual modalities can help the young visually impaired child to succeed in visual and other tasks

Michael Tobin,

Nicholas Bozic,

Graeme Douglas,

and John Greaney

*British Journal of Visual Impairment, January 1996; vol. 14, 1: pp. 11-17.*

9.

## Chapter 1: Psychosocial Development and Human Variance

Stella Chess and

Susan G. Gordon

*Review of Research in Education, January 1984; vol. 11, 1: pp. 3-62.*

Your search criteria: "*low vision*" and "*printed font type*" in all fields or "*eye disorder*" and "*printed font type*" in all fields or "*eye disease*" and "*printed font type*" in all fields or "*sight weak*" and "*printed font type*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: "*low vision*" and "*printed font colour*" in all fields or "*eye disorder*" and "*printed font colour*" in all fields or "*eye disease*" and "*printed font colour*" in all fields or "*sight weak*" and "*printed font colour*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: "*low vision*" and "*printed background colour*" in all fields or "*eye disorder*" and "*printed background colour*" in all fields or "*eye disease*" and "*printed background colour*" in all fields or "*sight weak*" and "*printed background colour*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your 10search criteria: "*low vision*" and "*printed gap width*" in all fields or "*eye disorder*" and "*printed gap width*" in all fields or "*eye disease*" and "*printed gap width*" in all fields or "*sight weak*" and "*printed gap width*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: "*low vision*" and "*printed line space*" in all fields or "*eye disorder*" and "*printed line space*" in all fields or "*eye disease*" and "*printed line space*" in all fields or "*sight weak*" and "*printed line space*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: "*low vision*" and "*printed luminance contrast*" in all fields or "*eye disorder*" and "*printed luminance contrast*" in all fields or "*eye disease*" and "*printed luminance contrast*" in all fields or "*sight weak*" and "*printed luminance contrast*" in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Søk på: Tiresias and "low vision"

1.

A study of the effect of letter spacing on the reading speed of young readers with low vision

McLeish, Eve

*British Journal of Visual Impairment, May 2007; vol. 25: pp. 133-143*

The aims of this study were two-fold: firstly, to establish a method of applying consistent letter spacing to documents using MS Word, and secondly, to investigate the effect of increased letter spacing on the reading speeds of readers with low vision. Tests on 14 readers with low vision showed that increased letter spacing benefited their reading speed and also reduced the critical print size of the majority of subjects tested. These findings could have a significant impact on the format of modified large print material used by low-vision readers in mainstream schools and lead to more inclusive practise in the classroom. Additionally, a simple to follow table has been produced to quantify the effect of increased letter spacing in MS Word. Although MS Word is almost universally used in mainstream schools to modify teaching resources, for low-vision readers, the method of applying letter spacing and its effect are not clear.

2.

Defining sight difficulties for education and employment research

Praat, Angelique, Keil, Sue

*British Journal of Visual Impairment, May 2003; vol. 21: pp. 40-46*

Your search criteria: *tiresias and "eye disorder"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *tiresias and "eye disease"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *tiresias and "sight weak"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Kommentarer til søket

Som resultatene viser er det ikke gjort vesentlige funn i databasen Sage Journals. Det er et relevant funn, men antall testpersoner er 14. Antallet er for lite til at generelle regler kan etableres.

Følgende funn er gjort i databasen Science Direct:

42 articles found for: ALL(("low vision" or "eye disease" or "eye disorder" or "sight weak") and ("printed font size" or "printed text" or "printed font type" or "printed font colour" or "printed background colour" or "printed gap width" or "printed line space" or "printed luminance contrast"))

1.

Principles of modern low vision rehabilitation Original Research Article  
Canadian Journal of Ophthalmology / Journal Canadien d'Ophthalmologie, Volume 41, Issue 3, 2006, Pages 289-312  
Samuel N. Markowitz

2.

Patients with AMD and a large absolute central scotoma can be trained successfully to use eccentric viewing, as demonstrated in a scanning laser ophthalmoscope Original Research Article  
Vision Research, Volume 43, Issue 16, July 2003, Pages 1777-1787  
Ulla L Nilsson, Christina Frennesson, Sven Erik G Nilsson

3.

Computer and World Wide Web Accessibility by Visually Disabled Patients: Problems and Solutions Original Research Article  
Survey of Ophthalmology, Volume 50, Issue 4, July–August 2005, Pages 394-405  
Michael F. Chiang, Roy G. Cole, Suhit Gupta, Gail E. Kaiser, Justin B. Starren

4.

Measuring reading performance Original Research Article  
Vision Research, In Press, Uncorrected Proof, Available online 16 March 2013  
Gary S. Rubin

#### Highlights

Reading difficulty is the most common complaint of people referred for low vision services. Significant developments in the design of clinical reading tests are briefly reviewed. Standardised clinical reading tests are informative about everyday reading. Discrepancies between self report and measured speed may predict future disability. Controversies about how and what to measure as reading outcomes are discussed.



5

The effect of letter-stroke boldness on reading speed in central and peripheral vision Original Research Article

Vision Research, In Press, Uncorrected Proof, Available online 21 March 2013

Jean-Baptiste Bernard, Girish Kumar, Jasmine Junge, Susana T.L. Chung

6.

Chapter 11 - Visual Acuity and Contrast Sensitivity

Retina (Fifth Edition), Volume One, 2013, Pages 300-306

Gary S. Rubin

7.

A Critical Reevaluation of Current Glaucoma Management: International Glaucoma Think Tank, July 27–29, 2006, Taormina, Sicily Original Research Article

Ophthalmology, Volume 114, Issue 11, Supplement, November 2007, Pages S1-S41

J. Caprioli, D.F. Garway-Heath

8.

The low vision distance telescope—how useful an aid?

Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Page 542

Martin P. Rubinstein, John B. Lowe

9.

The development and evaluation of a reading test for low vision individuals with macular loss: by J. Baldasare, G.R. Watson, S.G. Whittaker, and H. Miller-Shaffer. J Visual Impairment Blindness, June 1986, pp 785–789

Survey of Ophthalmology, Volume 32, Issue 1, July–August 1987, Pages 70-71

Gary S. Rubin

10.

Psychophysics of reading with a limited number of pixels: Towards the rehabilitation of reading ability with visual prosthesis Original Research Article

Vision Research, Volume 46, Issues 8–9, April 2006, Pages 1292-1301

Lin Fu, Shanqing Cai, Hui Zhang, Guangshu Hu, Xudong Zhang

11.

The role of low-spatial frequencies in lexical decision and masked priming Original Research Article

Brain and Cognition, Volume 69, Issue 3, April 2009, Pages 580-591

C. Boden, D. Giaschi

12.

Do serifs help in comprehension of printed text? An experiment with Cyrillic readers Original Research Article

Vision Research, Volume 65, 15 July 2012, Pages 21-24

Leyla Akhmadeeva, Ilnar Tukhvatullin, Boris Veytsman

13.

The mechanism of word crowding Original Research Article

Vision Research, Volume 52, Issue 1, 1 January 2012, Pages 61-69

Deyue Yu, Melanie M.U. Akau, Susana T.L. Chung

Highlights

We examined whether word crowding was due to low- or high-level factors. We measured performance for recognizing words flanked above and below by flankers. Flankers were real words, or word-like strings of different configurations. Crowding effects were similar across all flanker configurations. Word crowding arises as the result of interactions of low-level letter features.

14.

Amblyopia Characterization, Treatment, and Prophylaxis Review Article

Survey of Ophthalmology, Volume 50, Issue 2, March–April 2005, Pages 123-166

Kurt Simons

15.

An optical real-world text to speech reader Original Research Article

International Congress Series, Volume 1282, September 2005, Pages 1056-1060

Alan Parslow

16.

A preliminary investigation into the aetiology of Meares—Irlen syndrome Original Research Article

Ophthalmic and Physiological Optics, Volume 16, Issue 4, July 1996, Pages 286-296

B.J.W. Evans, A.J. Wilkins, J. Brown, A. Busby, A. Wingfield, R. Jeanes, J. Bald

17.

Imagery and spatial processes in blindness and visual impairment Review Article  
Neuroscience & Biobehavioral Reviews, Volume 32, Issue 8, October 2008, Pages 1346-1360  
Zaira Cattaneo, Tomaso Vecchi, Cesare Cornoldi, Irene Mammarella, Daniela Bonino,  
Emiliano Ricciardi, Pietro Pietrini

18.

Reading acuity in albinism: Evaluation with MNREAD charts Original Research Article  
Journal of American Association for Pediatric Ophthalmology and Strabismus, Volume 15,  
Issue 1, February 2011, Pages 29-32  
Kimberly Merrill, Katherine Hogue, Sara Downes, Ann M. Holleschau, Beth R. Kutzbach, John  
T. MacDonald, C. Gail Summers

19.

Learning to identify crowded letters: Does it improve reading speed? Original Research  
Article  
Vision Research, Volume 47, Issue 25, November 2007, Pages 3150-3159  
Susana T.L. Chung

20.

Chapter 11 - Sensory Aids: Vision  
Clinician's Guide to Assistive Technology, 2002, Pages 165-198  
Diane C. Bristow, Gail L. Pickering

21.

Developmental dyslexia and spatial relationship perception Original Research Article  
Cortex, Volume 48, Issue 4, April 2012, Pages 466-476  
Carlo Aleci, Giulio Piana, Marzia Piccoli, Marco Bertolini

22.

The impact of color combinations on the legibility of a Web page text presented on CRT  
displays Original Research Article  
International Journal of Industrial Ergonomics, Volume 38, Issues 11–12, November–  
December 2008, Pages 885-899  
Iztok Humar, Mirko Gradisˇar, Tomazˇ Turk

23.

Analysis of refractive & visual development from an infant screening programme  
*Ophthalmic and Physiological Optics*, Volume 17, Issue 6, November 1997, Pages 541-542  
Annette R. Grounds

24.

The multi-sensory approach to the optometric management of children with specific learning difficulties (such as dyslexia and dyspraxia)  
*Ophthalmic and Physiological Optics*, Volume 17, Issue 6, November 1997, Pages 542-543  
Annette R. Grounds

25.

Training of patients with age-related macular disease (AMD) using a scanner laser ophthalmoscope (SLO)  
*Ophthalmic and Physiological Optics*, Volume 17, Issue 6, November 1997, Page 542  
L.E. Culham, F.W. Fitzke, J. Marshall

26.

A summary of recent developments in computer technology to aid the visually impaired in the workplace  
*Ophthalmic and Physiological Optics*, Volume 17, Issue 6, November 1997, Page 542  
Anna Joseph, Robert Harper

27.

Chapter 10 - Computer Displays  
*Diagnosing and Treating Computer-Related Vision Problems*, 2003, Pages 157-183  
James E. Sheedy, Peter G. Shaw-McMinn

28.

Chapter 1 - Vision, acuity and contrast sensitivity  
*Assessment & Investigative Techniques*, 2005, Pages 1-15  
Sandip Doshi, William Harvey

29.

Anywhere, anytime (+anyone) access to the next-generation WWW Original Research Article  
*Computer Networks and ISDN Systems*, Volume 29, Issues 8–13, September 1997, Pages 1439-1446  
Gregg C. Vanderheiden

30.

Silk fibroin in ocular tissue reconstruction Original Research Article

*Biomaterials*, Volume 32, Issue 10, April 2011, Pages 2445-2458

Damien G. Harkin, Karina A. George, Peter W. Madden, Ivan R. Schwab, Dietmar W. Hutmacher, Traian V. Chirila

31.

A theory of visual motion

*Displays*, Volume 7, Issue 3, July 1986, Pages 148-149

32.

The effect of colour on legibility

*Displays*, Volume 7, Issue 3, July 1986, Page 149

33.

Chapter 5 - Defining Inclusive Innovation

*Digital Outcasts*, 2013, Pages 93-124

Kel Smith

34.

How well do we remember brightness?

*Displays*, Volume 7, Issue 3, July 1986, Page 149

35.

Chapter 3 - CAPTCHAs: An Artificial Intelligence Application to Web Security

*Advances in Computers*, Volume 83, 2011, Pages 109-181

José María Gómez Hidalgo, Gonzalo Alvarez

36.

Medical field units in Nigeria

*Transactions of the Royal Society of Tropical Medicine and Hygiene*, Volume 48, Issue 2, March 1954, Pages 156-182

37.

Operation ARA: A computerized learning game that teaches critical thinking and scientific reasoning Original Research Article

*Thinking Skills and Creativity, Volume 7, Issue 2, August 2012, Pages 93-100*

Diane F. Halpern, Keith Millis, Arthur C. Graesser, Heather Butler, Carol Forsyth, Zhiqiang Cai

Highlights

We designed a computerized learning game that teaches critical thinking/scientific reasoning using interactive natural language tutorials. The game was designed using the principles from the science of learning, such as active responding, an interesting story line, repeated testing, and engagement with real-life examples and from learning games. Early testing shows large learning gains for students at three different types of higher education—an open admissions community college, a state university, and a highly selective private college. Student response has been highly positive

38.

The burgeoning presbyopic population: an emerging 20th century phenomenon Original Research Article

*Ophthalmic and Physiological Optics, Volume 18, Issue 4, July 1998, Pages 325-334*

Jonathan S. Pointer

39.

Chapter 11 - Transitions into Higher Education

*Therapist's Guide to Learning and Attention Disorder, 2003, Pages 335-378*

Micki Bryant, Mark Turner, Aubrey H. Eine

40.

The Teaching of Pathology in Undergraduate Education Programs in Medicine in Europe Original Research Article

*Pathology - Research and Practice, Volume 193, Issue 4, 1997, Pages 241-256*

O.H. Iversen

41.

Novel RDH12 mutations associated with Leber congenital amaurosis and cone-rod dystrophy: Biochemical and clinical evaluations Original Research Article

*Vision Research, Volume 47, Issue 15, July 2007, Pages 2055-2066*

Wenyu Sun, Christina Gerth, Akiko Maeda, David T. Lodowski, Lauren Van Der Kraak, David A. Saperstein, Elise Héon, Krzysztof Palczewski

42.

Astigmatism

*Encyclopedia of the Eye, 2010, Pages 135-145*

M.J. Cox

Søk med søkeordet: Tiresias:

ALL(tiresias and ("low vision" or "eye disorder" or " eye disease" or " sight weak"))

1.

The effect of letter-stroke boldness on reading speed in central and peripheral vision Original Research Article

*Vision Research, In Press, Uncorrected Proof, Available online 21 March 2013*

Jean-Baptiste Bernard, Girish Kumar, Jasmine Junge, Susana T.L. Chung

| [PDF \(975 K\)](#) | [Related articles](#) | [Related reference work articles](#)

2.

Courier: a better font for reading with age-related macular degeneration Original Research Article

*Canadian Journal of Ophthalmology / Journal Canadien d'Ophthalmologie, Volume 48, Issue 1, February 2013, Pages 56-62*

Luminita Tarita-Nistor, Dianne Lam, Michael H. Brent, Martin J. Steinbach, Esther G. González

3.

Courier: a better font for reading with age-related macular degeneration Original Research Article

*Canadian Journal of Ophthalmology / Journal Canadien d'Ophthalmologie, Volume 48, Issue 1, February 2013, Pages 56-62*

Luminita Tarita-Nistor, Dianne Lam, Michael H. Brent, Martin J. Steinbach, Esther G. González

4.

Investigation into font characteristics for optimum reading fluency in readers with sight problems Original Research Article

*International Congress Series, Volume 1282, September 2005, Pages 530-533*

M. Feely, G.S. Rubin, K. Ekstrom, S. Perera

## Abstract

Specialised fonts, designed according to preferences of readers with sight problems, have not necessarily led to enhanced reading performance. This study's aim was to evaluate the effects of print size, font type and line width on reading speed to help provide recommendations to designers for creating more accessible print materials. 43 patients with acuity 6/30 or better (median age = 72) read texts presented randomly in four sizes (10, 12, 14 and 16 points), for each of four fonts (Times New Roman, Helvetica, Tiresias PCfont and Foundry Form Sans) at a standard line width (70 characters). A subset of fonts were tested at additional line widths (35 and 90). Significant main effects were found for point size and font type; none was found for line width. Larger point sizes were read faster than smaller point sizes and one of the fonts Tiresias PCfont produced faster reading speeds. However, further investigation into font types revealed that Tiresias PCfont's nominal point size was not equivalent to the three comparison fonts and, after adjustment for amount of page space used, no significant differences were found. Our results suggest that font type has little effect on reading speed, once the size of the print is taken into account. A statistical model of the effects of print size on reading speed indicates that a change from 12 to 14 points print would increase the proportion of the population able to read fluently (i.e. > 115 words/min) from 80% to 85%.

### *Kommentarer til søket*

Søket gav mange tilslag, men svært få som kan gi oss svar av generell natur. Noen av dem tar for seg ulike øyelidelser, men bringer lite generelt tilbake.

### *Analyse av resultatene*

Søket totalt har gitt ert svært magert resultat. Selv om det ble forsøkt å unngå studier av lesbarhet på tekst på skjermer, er mange av funnene i den retning. Et annet trekk er at studier i stor grad retter seg mot bestemte øyelidelser, som gjør det vanskelig å generalisere. Det er også slik at studier av konkrete øyelidelser er basert på svært få testpersoner, gjerne bare et 10-talls personer.



## Søk på dysleksi

*Følgende treff er gjort i databasen PsychInfo:*

1.

Journals@Ovid Full Text Relative laterality of the N170 to single letter stimuli is predicted by a concurrent neural index of implicit processing of letternames.

Stevens, Courtney \*; McIlraith, Autumn; Rusk, Neal; Niermeyer, Madison; Waller, Hannah  
Neuropsychologia. 51(4):667-674, March 2013.

[Article.] [Articles]

AN: 00006125-201303000-00010.

2.

Journals@Ovid Full Text Morphological Awareness Intervention in School-Age Children With Language and Literacy Deficits: A Case Study.

Wolter, Julie A.; Green, Laura

Topics in Language Disorders. 33(1):27-41, January/March 2013.

[Article.] [Original Articles]

AN: 00011363-201301000-00004.

3.

Journals@Ovid Full Text Emergent Literacy in Kindergartners With Cochlear Implants.

Nittrouer, Susan 1; Caldwell, Amanda 1; Lowenstein, Joanna H. 1; Tarr, Eric 1; Holloman, Christopher 2

Ear & Hearing. 33(6):683-697, November/December 2012.

[Article.] [Research Articles]

AN: 00003446-201211000-00002.

4.

Journals@Ovid Full Text Delayed Maturation and Differentiation of Neurons in Focal Cortical Dysplasia With the Transmantle Sign: Analysis of Layer-Specific Marker Expression.

Sakakibara, Takafumi MD; Sukigara, Sayuri MD; Saito, Takashi MD; Otsuki, Taisuke MD; Takahashi, Akio MD; Kaneko, Yuu MD; Kaido, Takanobu MD; Saito, Yuko MD; Sato, Noriko MD; Kimura, Yukio MD; Nakagawa, Eiji MD; Sugai, Kenji MD; Sasaki, Masayuki MD; Goto, Yu-ichi MD; Itoh, Masayuki MD

Journal of Neuropathology & Experimental Neurology. 71(8):741-749, August 2012.

[Article.] [Original Articles]

AN: 00005072-201208000-00008.

5.

Journals@Ovid Full Text An association study of sequence variants in the forkhead box P2 (FOXP2) gene and adulthood attention-deficit/hyperactivity disorder in two European samples.

Ribases, Marta a,b,c; Sanchez-Mora, Cristina a,b,c,d; Ramos-Quiroga, Josep Antoni a,c,h; Bosch, Rosa a,c,h; Gomez, Nuria a,c; Nogueira, Mariana a,c; Corrales, Montse a; Palomar, Gloria a; Jacob, Christian P. i; Gross-Lesch, Silke i; Kreiker, Susanne i; Reif, Andreas i; Lesch, Klaus Peter i; Cormand, Bru d,f,g; Casas, Miquel a,c,h; Bayes, Monica e

Psychiatric Genetics. 22(4):155-160, August 2012.

[Article.] [ORIGINAL ARTICLES]

AN: 00041444-201208000-00001.

6.

Journals@Ovid Full Text One-year Follow-up of Tick-borne Central Nervous System Infections in Childhood.

Engman, Mona-Lisa MD, PhD \*,[S]; Lindstrom, Katarina MD, PhD \*,[S]; Sallamba, Marie MD [S]; Hertz, Carl MD \*; Sundberg, Berit +; Hansson, Magnus E. A. MD \*; Lindquist, Lars MD, PhD ++,[P]; Orvell, Claes MD, PhD [forms double vertical]; Liddefelt, Karl-Johan MD, PhD \*,[S]; Sundin, Mikael MD, PhD \*,[S]

Pediatric Infectious Disease Journal. 31(6):570-574, June 2012.

[Article.] [Original Studies]

AN: 00006454-201206000-00007.

7.

Journals@Ovid Full Text Differences Between the Pattern of Developmental Abnormalities in Autism Associated With Duplications 15q11.2-q13 and Idiopathic Autism.

Wegiel, Jerzy PhD; Schanen, N. Carolyn MD, PhD; Cook, Edwin H. MD; Sigman, Marian MD; Brown, W. Ted MD, PhD; Kuchna, Izabela MD, PhD; Nowicki, Krzysztof MD; Wegiel, Jarek MSc; Imaki, Humi PhD; Ma, Shuang Yong MD, PhD; Marchi, Elaine MSc; Wierzbna-Bobrowicz, Teresa MD, PhD; Chauhan, Abha PhD; Chauhan, Ved PhD; Cohen, Ira L. PhD; London, Eric MD; Flory, Michael PhD; Lach, Boleslaw MD, PhD; Wisniewski, Thomas MD

Journal of Neuropathology & Experimental Neurology. 71(5):382-397, May 2012.

[Article.] [Original Articles]

AN: 00005072-201205000-00003.

8.

Journals@Ovid Full Text Ocular Dominance Stability and Reading Skill: A Controversial Relationship.

Zeri, Fabrizio \*; De Luca, Maria \*; Spinelli, Donatella \*; Zoccolotti, Pierluigi \*

Optometry & Vision Science. 88(11):1353-1362, November 2011.

[Article.] [Original Article]

AN: 00006324-201111000-00013.

9.

Journals@Ovid Full Text Neural correlates of sentence reading in children with reading difficulties.

Simos, Panagiotis G. a; Rezaie, Roozbeh b; Fletcher, Jack M. c; Juranek, Jenifer b; Papanicolaou, Andrew C. b

Neuroreport. 22(14):674-678, October 5, 2011.

[Miscellaneous Article.] [COGNITIVE NEUROSCIENCE AND NEUROPSYCHOLOGY]

AN: 00001756-201110050-00002.

10.

Journals@Ovid Full Text How Many Functional Brains in Developmental Dyslexia? When the History of Language Delay Makes the Difference.

Pecini, Chiara PhD \*; Biagi, Laura PhD \*; Brizzolara, Daniela PhD \*,+; Cipriani, Paola MD, PhD \*,+; Di Lieto, Maria Chiara PsyD ++; Guzzetta, Andrea MD, PhD \*; Tosetti, Michela PhD \*; Chilosi, Anna Maria MD, PhD \*

Cognitive & Behavioral Neurology. 24(2):85-92, June 2011.

[Article.] [Original Studies]

AN: 00146965-201106000-00006.

11.

Journals@Ovid Full Text Reading disappearing text: Why do children refixate words?.

Blythe, Hazel I. a,\*; Haikio, Tuomo b; Bertam, Raymond b; Liversedge, Simon P. a; Hyona, Jukka b

Vision Research. 51(1):84-92, January 2011.

[Article.] [Articles]

AN: 00077462-201101000-00011.

12.

Journals@Ovid Full Text Auditory Brain Stem Response to Complex Sounds: A Tutorial.

Skoe, Erika 1; Kraus, Nina 1,2

Ear & Hearing. 31(3):302-324, June 2010.

[Review.] [Review]

AN: 00003446-201006000-00002.

13.

Journals@Ovid Full Text Early Exposure to Anesthesia and Learning Disabilities in a Population-based Birth Cohort.

Wilder, Robert T. M.D., Ph.D. \*; Flick, Randall P. M.D., M.P.H. +; Sprung, Juraj M.D., Ph.D. ++; Katusic, Slavica K. M.D. [S]; Barbaresi, William J. M.D. [//]; Mickelson, Christopher M.D. #; Gleich, Stephen J. M.D. \*\*; Schroeder, Darrell R. M.S. ++; Weaver, Amy L. M.S. ++; Warner, David O. M.D. ++

Anesthesiology. 110(4):796-804, April 2009.

[Miscellaneous Article.] [2008 Anesthesiology/Faer Session: Anesthesia and the Developing Brain: Implications for Obstetrics and Pediatrics]

AN: 00000542-200904000-00021.

14.

Journals@Ovid Full Text The role of low-spatial frequencies in lexical decision and masked priming.

Boden, C. \*; Giaschi, D.

Brain & Cognition. 69(3):580-591, April 2009.

[Article.] [Articles]

AN: 00002097-200904000-00017.

15.

Journals@Ovid Full Text A cognitive perspective on Singaporean primary school pupils' use of reading strategies in learning to read in English.

Zhang, Lawrence Jun 1,\*; Gu, Peter Yongqi 2; Hu, Guangwei 1

British Journal of Educational Psychology. 78(2):245-271, June 2008.

[Article.] [Article]

AN: 00002314-200806000-00004.

16.

Journals@Ovid Full Text Online anatomy and physiology: piloting the use of an anatomy and physiology e-book-VLE hybrid in pre-registration and post-qualifying nursing programmes at the University of Salford.

Raynor, Michael \*; Iggulden, Helen +

Health Information & Libraries Journal. 25(2):98-105, June 2008.

[Article.] [Original article]

AN: 00130860-200806000-00003.

17.

Journals@Ovid Full Text Beating the Odds-Nothing Is Impossible, Its Just a Road Less Traveled.

Brady, Mike 1

Schizophrenia Bulletin. 34(2):204-211, March 2008.

[Article.] [Special Features: First Person Account]

AN: 00007489-200803000-00002.

18.

Journals@Ovid Full Text Hemispheric differences in processing handwritten cursive.

Hellige, Joseph B. \*; Adamson, Maheen M.

Brain & Language. 102(3):215-227, September 2007.

[Article.] [Article]

AN: 00002425-200709000-00001.

19.

Journals@Ovid Full Text Promising Practices for Providing Alternative Media to Postsecondary Students with Print Disabilities.

Wolfe, Gerri L.; Lee, Christopher

Learning Disabilities Research & Practice. 22(4):256-263, November 2007.

[Article.] [Special Issue]

AN: 00012204-200702240-00005.

20.

Journals@Ovid Full Text Determining Appropriate Accommodations for Postsecondary Students with Reading and Written Expression Disorders.

Lindstrom, Jennifer H.

Learning Disabilities Research & Practice. 22(4):229-236, November 2007.

[Article.] [Special Issue]

AN: 00012204-200702240-00002.

21.

Journals@Ovid Full Text "Scientific roots" of dualism in neuroscience.

Arshavsky, Yuri I. \*

Progress in Neurobiology. 79(4):190-204, July 2006.

[Article.] [Article]

AN: 00006761-200607000-00002.

22.

Journals@Ovid Full Text The Effect of Coloured Overlays on Reading Ability in Children with Autism.

Ludlow, Amanda K. 1,3; Wilkins, Arnold J. 2; Heaton, Pam 1

Journal of Autism & Developmental Disorders. 36(4):507-516, May 2006.

[Article.] [Article]

AN: 00004591-200605000-00006.

23.

Journals@Ovid Full Text Latencies of stimulus-driven eye movements are shorter in dyslexic subjects.

Bednarek, Dorota B. a,c,\*; Tarnowski, Adam b,d; Grabowska, Anna a

Brain & Cognition. 60(1):64-69, February 2006.

[Article.] [Articles]

AN: 00002097-200602000-00008.

24.

Journals@Ovid Full Text Hyperlexia profiles.

Kennedy, Becky

Brain & Language. 84(2):204-221, February 2003.

[Article.] [Articles]

AN: 00002425-200302000-00004.

25.

Journals@Ovid Full Text Luminance and chromatic contrast sensitivity in dyslexia: the magnocellular deficit hypothesis revisited.

Bednarek, Dorota B.; Grabowska, Anna CA

Neuroreport. 13(18):2521-2525, December 20, 2002.

[Miscellaneous Article.] [Vision, Central]

AN: 00001756-200212200-00028.

26.

Journals@Ovid Full Text Understanding the Nature of the General Factor of Intelligence: The Role of Individual Differences in Neural Plasticity as an Explanatory Mechanism.

Garlick, Dennis 1,2

Psychological Review. 109(1):116-136, January 2002.

[Article.] [Articles]

AN: 00006832-200201000-00008.

27.

Journals@Ovid Full Text Are Hemispheric Strategy Differences Independent of the Level of Performance?.

Helligeor, Joseph B. 1,2; Marks, N. Lee 1,3

Neuropsychology. 15(3):380-395, July 2001.

[Article.] [Articles]

AN: 00062896-200107000-00007.



28.

Journals@Ovid Full Text Neurovisual rehabilitation: recent developments and future directions.

Kerkhoff, Georg

Journal of Neurology, Neurosurgery & Psychiatry. 68(6):691-706, June 2000.

[Review.] [Review]

AN: 00005069-200006000-00004.

29.

Journals@Ovid Full Text ABC of Medical Computing: ADAPTIVE COMPUTER TECHNOLOGY.

Poole, C J M; Millman, Andrew

BMJ. 311(7013):1149-1151, October 28, 1995.

[Miscellaneous.] [Education & Debate]

AN: 00002591-199510280-00026.

30.

Journals@Ovid Full Text The Role of Spatial Attention in Visual Word Processing.

McCann, Robert S. 1,4; Folk, Charles L. 2; Johnston, James C. 3

Journal of Experimental Psychology: Human Perception & Performance. 18(4):1015-1029, November 1992.

[Article.] [Articles]

AN: 00004788-199211000-00009.

31.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Emergent Literacy in Kindergartners With Cochlear Implants.

Nittrouer, Susan 1; Caldwell, Amanda 1; Lowenstein, Joanna H. 1; Tarr, Eric 1; Holloman, Christopher 2

Ear & Hearing. 33(6):683-697, November/December 2012.

[Article.] [Research Articles]

AN: 00003446-201211000-00002.

32.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Delayed Maturation and Differentiation of Neurons in Focal Cortical Dysplasia With the Transmantle Sign: Analysis of Layer-Specific Marker Expression.

Sakakibara, Takafumi MD; Sukigara, Sayuri MD; Saito, Takashi MD; Otsuki, Taisuke MD; Takahashi, Akio MD; Kaneko, Yuu MD; Kaido, Takanobu MD; Saito, Yuko MD; Sato, Noriko MD; Kimura, Yukio MD; Nakagawa, Eiji MD; Sugai, Kenji MD; Sasaki, Masayuki MD; Goto, Yu-ichi MD; Itoh, Masayuki MD

Journal of Neuropathology & Experimental Neurology. 71(8):741-749, August 2012.

[Article.] [Original Articles]

AN: 00005072-201208000-00008.

33.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text An association study of sequence variants in the forkhead box P2 (FOXP2) gene and adulthood attention-deficit/hyperactivity disorder in two European samples.

Ribases, Marta a,b,c; Sanchez-Mora, Cristina a,b,c,d; Ramos-Quiroga, Josep Antoni a,c,h; Bosch, Rosa a,c,h; Gomez, Nuria a,c; Nogueira, Mariana a,c; Corrales, Montse a; Palomar, Gloria a; Jacob, Christian P. i; Gross-Lesch, Silke i; Kreiker, Susanne i; Reif, Andreas i; Lesch, Klaus Peter i; Cormand, Bru d,f,g; Casas, Miquel a,c,h; Bayes, Monica e

Psychiatric Genetics. 22(4):155-160, August 2012.

[Article.] [ORIGINAL ARTICLES]

AN: 00041444-201208000-00001.

34.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text One-year Follow-up of Tick-borne Central Nervous System Infections in Childhood.

Engman, Mona-Lisa MD, PhD \*,[S]; Lindstrom, Katarina MD, PhD \*,[S]; Sallamba, Marie MD [S]; Hertz, Carl MD \*; Sundberg, Berit +; Hansson, Magnus E. A. MD \*; Lindquist, Lars MD, PhD ++,[P]; Orvell, Claes MD, PhD [forms double vertical]; Lidfelt, Karl-Johan MD, PhD \*,[S]; Sundin, Mikael MD, PhD \*,[S]

Pediatric Infectious Disease Journal. 31(6):570-574, June 2012.

[Article.] [Original Studies]

AN: 00006454-201206000-00007.

35.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Differences Between the Pattern of Developmental Abnormalities in Autism Associated With Duplications 15q11.2-q13 and Idiopathic Autism.

Wegiel, Jerzy PhD; Schanen, N. Carolyn MD, PhD; Cook, Edwin H. MD; Sigman, Marian MD; Brown, W. Ted MD, PhD; Kuchna, Izabela MD, PhD; Nowicki, Krzysztof MD; Wegiel, Jarek MSc; Imaki, Humi PhD; Ma, Shuang Yong MD, PhD; Marchi, Elaine MSc; Wierzba-Bobrowicz, Teresa MD, PhD; Chauhan, Abha PhD; Chauhan, Ved PhD; Cohen, Ira L. PhD; London, Eric MD; Flory, Michael PhD; Lach, Boleslaw MD, PhD; Wisniewski, Thomas MD

Journal of Neuropathology & Experimental Neurology. 71(5):382-397, May 2012.

[Article.] [Original Articles]

AN: 00005072-201205000-00003.

36.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Ocular Dominance Stability and Reading Skill: A Controversial Relationship.

Zeri, Fabrizio \*; De Luca, Maria \*; Spinelli, Donatella \*; Zoccolotti, Pierluigi \*

Optometry & Vision Science. 88(11):1353-1362, November 2011.

[Article.] [Original Article]

AN: 00006324-201111000-00013.

37.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Neural correlates of sentence reading in children with reading difficulties.

Simos, Panagiotis G. a; Rezaie, Roozbeh b; Fletcher, Jack M. c; Juranek, Jenifer b; Papanicolaou, Andrew C. b

Neuroreport. 22(14):674-678, October 5, 2011.

[Miscellaneous Article.] [COGNITIVE NEUROSCIENCE AND NEUROPSYCHOLOGY]

AN: 00001756-201110050-00002.

38.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Auditory Brain Stem Response to Complex Sounds: A Tutorial.

Skoe, Erika 1; Kraus, Nina 1,2

Ear & Hearing. 31(3):302-324, June 2010.

[Review.] [Review]

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39.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Early Exposure to Anesthesia and Learning Disabilities in a Population-based Birth Cohort.

Wilder, Robert T. M.D., Ph.D. \*; Flick, Randall P. M.D., M.P.H. +; Sprung, Juraj M.D., Ph.D. ++; Katusic, Slavica K. M.D. [S]; Barbaresi, William J. M.D. [/]; Mickelson, Christopher M.D. #; Gleich, Stephen J. M.D. \*\*; Schroeder, Darrell R. M.S. ++; Weaver, Amy L. M.S. ++; Warner, David O. M.D. ++

Anesthesiology. 110(4):796-804, April 2009.

[Miscellaneous Article.] [2008 Anesthesiology/Faer Session: Anesthesia and the Developing Brain: Implications for Obstetrics and Pediatrics]

AN: 00000542-200904000-00021.

40.

HiG - Hgskolen i Gjvik Journals@Ovid Full Text Luminance and chromatic contrast sensitivity in dyslexia: the magnocellular deficit hypothesis revisited.

Bednarek, Dorota B.; Grabowska, Anna CA

Neuroreport. 13(18):2521-2525, December 20, 2002.

[Miscellaneous Article.] [Vision, Central]

AN: 00001756-200212200-00028.

41.

The neurophysiological basis of the integration of written and heard syllables in dyslexic adults.

Mittag M., Thesleff P., Laasonen M., Kujala T.

Embase

Clinical Neurophysiology. 124 (2) (pp 315-326), 2013. Date of Publication: February 2013.

[Journal: Article]

AN: 2013044571

Publisher Elsevier Ireland Ltd (P.O. Box 85, Limerick, Ireland), Year 2013

42.

The role of low-spatial frequencies in lexical decision and masked priming.

Boden C., Giaschi D.

Embase

Brain and Cognition. 69 (3) (pp 580-591), 2009. Date of Publication: April 2009.

[Journal: Article]

AN: 2009096101

Publisher

Academic Press Inc. (6277 Sea Harbor Drive, Orlando FL 32887-4900, United States), Year 2009

43.

The neurophysiological basis of the integration of written and heard syllables in dyslexic adults.

Mittag M. Thesleff P. Laasonen M. Kujala T.

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R)

Clinical Neurophysiology. 124(2):315-26, 2013 Feb.

[Journal Article. Research Support, Non-U.S. Gov't]

UI: 22939780

Authors Full Name

Mittag, Maria. Thesleff, Paula. Laasonen, Marja. Kujala, Teija.

Year 2013

44.

Temporal visual field defects are associated with monocular inattention in chiasmal pathology.

Fledelius HC.

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R)

Acta Ophthalmologica. 87(7):769-75, 2009 Nov.

[Case Reports. Journal Article]

UI: 18976316

Authors Full Name

Fledelius, Hans C.

45.

The neurophysiological basis of the integration of written and heard syllables in dyslexic adults. [References].

Mittag, Maria; Thesleff, Paula; Laasonen, Marja; Kujala, Teija.

PsycINFO

Clinical Neurophysiology. Vol.124(2), Feb 2013, pp. 315-326.

[Journal; Peer Reviewed Journal] [Journal Article]

AN: Peer Reviewed Journal: 2012-24001-001.

46.

The design and development of the Sylexiad typeface. [References].

Hillier, Robert.

PsycINFO

Brunswick, Nicola [Ed]. (2012). Supporting dyslexic adults in higher education and the workplace. (pp. 185-196). xi, 220 pp. Wiley-Blackwell.

[Book; Edited Book] [Chapter]

AN: Book: 2012-16317-019.

47.

Reading comprehension solutions for college students with dyslexia in an era of technology: An integrated approach. [References].

Gregg, Noel; Banerjee, Manju.

PsycINFO

Reid, Gavin [Ed]. (2009). The Routledge companion to dyslexia. (pp. 265-285). xxi, 362 pp. New York, NY, US: Routledge/Taylor & Francis Group; US.

[Book; Edited Book] [Chapter]

AN: Book: 2008-17747-021.

48.

What successful adults with dyslexia teach educators about children. [References].

Fink, Rosalie.

PsycINFO

Fischer, Kurt W [Ed]; Bernstein, Jane Holmes [Ed]; Immordino-Yang, Mary Helen [Ed]. (2007). Mind, brain, and education in reading disorders. (pp. 264-281). xviii, 333 pp. New York, NY, US: Cambridge University Press; US.

[Book; Edited Book] [Chapter]

AN: Book: 2008-09623-019.

49.

"Is dyslexia caused by a visual deficit?": Comment. [References].

O'Brien, Beth A; Mansfield, J. Stephen; Legge, Gordon E.

PsycINFO

Vision Research. Vol.41(23), Oct 2001, pp. 3071.

[Journal; Peer Reviewed Journal] [Comment/Reply]

AN: Peer Reviewed Journal: 2002-02511-011.

50.

Is dyslexia caused by a visual deficit? [References].

Skottun, Bernt Christian.

PsycINFO

Vision Research. Vol.41(23), Oct 2001, pp. 3069-3070.

[Journal; Peer Reviewed Journal] [Letter]

AN: Peer Reviewed Journal: 2002-02511-010.



51.

Reading and visual discomfort.

Wilkins, Arnold.

PsycINFO

Willows, Dale M [Ed]; Kruk, Richard S [Ed]; Corcos, Evelyne [Ed]. (1993). Visual processes in reading and reading disabilities. (pp. 435-456). xxiii, 506 pp. Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc; England.

[Book; Edited Book] [Chapter; Reprint]

AN: Book: 1993-98915-020.

### *Kommentarer til treff*

Det er ikke gjort noen relevante funn i søket.

### *Følgende treff er gjort i databasen Sage Journals:*

Your search criteria: *dyslexia and "printed font size"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Results 1-34 of 34 found for *dyslexia and "printed text"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to me.

1.

The Case Study Approach to Understanding Learning Disabilities

Raim, Joan, Adams, Ruth

*J Learn Disabil, Feb 1982; vol. 15: pp. 116-118*

2.

Generating living theory and understanding in action research studies

Whitehead, Jack

*Action Research, Mar 2009; vol. 7: pp. 85-99*

3.

Book reviews : Dyslexia: a hundred years on T. R. Miles and Elaine Miles Milton Keynes:  
Open University Press, 1990

Parkinson, Elaine

*Child Language Teaching and Therapy, Jan 1992; vol. 8: pp. 338-340*

4.

Reconceptualizing Reading and Dyslexia

Weaver, Constance

*Communication Disorders Quarterly, Jan 1994; vol. 16: pp. 23-35*

5.

Motion processing deficits in migraine are related to contrast sensitivity

Shepherd, Alex J, Beaumont, Heidi M, Hine, Trevor J

*Cephalalgia, May 2012; vol. 32: pp. 554-570*

6.

Increasing Access to Learning for the Adult Basic Education Learner With Learning  
Disabilities: Evidence-Based Accommodation Research

Gregg, Noel

*J Learn Disabil, Jan 2012; vol. 45: pp. 47-63*

7.

Evaluating the Efficacy of Remediation for Struggling Readers in High School

Lovett, Maureen W., Lacerenza, Lea, De Palma, Maria, Frijters, Jan C.

*J Learn Disabil, Mar 2012; vol. 45: pp. 151-169*

8.

Early Oral Language Markers of Poor Reading Performance in Hong Kong Chinese Children

Liu, Phil D., McBride-Chang, Catherine, Wong, Anita M.-Y., Tardif, Twila, Stokes, Stephanie F.,  
Fletcher, Paul, Hua Shu,

*J Learn Disabil, Jul 2010; vol. 43: pp. 322-331*

9.

A Mother's Thoughts on Inclusion

Carr, Margaret N.

*J Learn Disabil*, Nov 1993; vol. 26: pp. 590-592

10.

Detecting Health Fraud In the Field of Learning Disabilities

Worrall, Russell S.

*J Learn Disabil*, Apr 1990; vol. 23: pp. 207-212

11.

Bimodal Reading: Benefits of a Talking Computer for Average and Less Skilled Readers

Montali, Julie, Lewandowski, Lawrence

*J Learn Disabil*, May 1996; vol. 29: pp. 271-279

12.

Second Graders as Spellers: What Types of Errors Are They Making?

Arndt, Elissa J., Foorman, Barbara R.

*Assessment for Effective Intervention*, Dec 2010; vol. 36: pp. 57-67

13.

Phonology and the Problems of Learning to Read and Write

Lieberman, Isabelle Y., Shankweiler, Donald

*Remedial and Special Education*, Nov 1985; vol. 6: pp. 8-17

14.

Assistive Technology Use by Students With LD in Postsecondary Education: A Case of Application Before Investigation?

Holmes, Alana, Silvestri, Robert

*Canadian Journal of School Psychology*, Mar 2012; vol. 27: pp. 81-97

15.

Over the Brink of the Millennium: Have We Said All We Can Say About Language-Based Learning Disabilities?

Wallach, Geraldine P.

*Communication Disorders Quarterly*, Jan 2004; vol. 25: pp. 44-55

16.

A Concept of Word in Text: A Pivotal Event in Early Reading Acquisition

Flanigan, Kevin

*Journal of Literacy Research : A publication of the Literacy Research Association*, Mar 2007; vol. 39: pp. 37-70

17.

Developmental Dyscalculia

Kosc, Ladislav

*J Learn Disabil*, Mar 1974; vol. 7: pp. 164-177

18.

Book reviews : Literacy for a changing world Frances Christie, editor Hawthorn, Victoria: The Australian Council for Educational Research, 1990. xi + 219 pp. (Distributed in the UK by NFER-Nelson, Windsor.)

Lockwood, Michael

*Child Language Teaching and Therapy*, Jan 1992; vol. 8: pp. 335-338

19.

Assessment: Projections of its Decline and Fall With Suggestions for its Resurrection

Nolen, P. A.

*J Learn Disabil*, Apr 1986; vol. 19: pp. 203-205

20.

Association of Educational Therapists: Position Paper on the SAT

Ungerleider, Dorothy, Maslow, Phyllis

*J Learn Disabil*, Jul 2001; vol. 34: pp. 311-314

21.

Compensatory Training for Disabled Readers: Research to Practice

Fisher, Dennis F.

*J Learn Disabil*, Mar 1980; vol. 13: pp. 134-140

22.

Struggling First-Grade Readers: The Frequency and Progress of Their Reading

Chard, David J., Kameenui, Edward J.

*Journal of Special Education*, Apr 2000; vol. 34: pp. 28-38

23.

Prediction of Reading Ability: A Cross-Validation Study of the Simple View of Reading

Chen, Ru San, Vellutino, Frank R.

*Journal of Literacy Research : A publication of the Literacy Research Association*, Mar 1997; vol. 29: pp. 1-a-24

24.

Information-Processing Differences of College-Age Readers Differing in Reading Comprehension and Speed

Rankin, Joan L.

*Journal of Literacy Research : A publication of the Literacy Research Association*, Sep 1993; vol. 25: pp. 261-278

25.

The oral reading errors of partially sighted children

Corley, Gianetta, Pring, Linda

*British Journal of Visual Impairment*, Mar 1993; vol. 11: pp. 24-27

26.

A Comparison of Three Methods of Reading-While-Listening

van Bon, Wim H.J., Boksebeld, Lidwien M., Font Freide, Tonneke A.M., van den Hurk, Ardine J.M.

*J Learn Disabil*, Oct 1991; vol. 24: pp. 471-476

27.

Equal Opportunity in Teacher Education Programs for the Learning Disabled

Yanok, James

*Journal of Teacher Education, Jan 1987; vol. 38: pp. 48-52*

28.

Verbal-Coding Deficits in the Recall of Pictorial Information by Learning Disabled Readers:  
The Influence of a Lexical System

Swanson, H. Lee

*American Educational Research Journal, Jan 1987; vol. 24: pp. 143-170*

29.

Screening for Secondary Intervention: Concept and Context

Foorman, Barbara R., Ciancio, Dennis J.

*J Learn Disabil, Dec 2005; vol. 38: pp. 494-499*

30.

The role of phonological representation in decoding skills of young readers

Hester, Elizabeth, Hodson, Barbara Williams

*Child Language Teaching and Therapy, Jun 2004; vol. 20: pp. 115-133*

31.

Introduction to the Special Series

Pedrotty Bryant, Diane

*Intervention in School and Clinic, May 1999; vol. 34: pp. 259-260*

32.

Using Assistive Technology Adaptations to Include Students with Learning Disabilities in  
Cooperative Learning Activities

Bryant, Diane Pedrotty, Bryant, Brian R.

*J Learn Disabil, Jan 1998; vol. 31: pp. 41-54*

33.

The Fernald Technique: Modifications Increase the Probability of Success: In the Field

Miccinati, Jeannette

*J Learn Disabil*, Mar 1979; vol. 12: pp. 139-142

34.

Implications of Schemata Theory for Learning Disabled Readers

Seidenberg, Pearl L.

*J Learn Disabil*, Jun 1982; vol. 15: pp. 352-354

Your search criteria: *dyslexia and "printed font type"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *dyslexia and "printed font colour"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *dyslexia and "printed background colour"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *dyslexia and "printed gap width"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *dyslexia and "printed line space"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

Your search criteria: *dyslexia and "printed luminance contrast"* in all fields, from Jan 1847 through Oct 2013 in SAGE journals available to mematched zero articles.

### ***Kommentarer til treff***

Av treffene I Sage Journals finnes ingen relevante funn.

### ***Følgende treff er gjort i databasen Science Direct:***

84 articles found for: ALL(dyslexia and ("printed font size" or "printed text" or "printed font type" or "printed font colour" or "printed background colour" or "printed gap width" or "printed line space" or "printed luminance contrast"))

1.

Use of the Hermann grid illusion in the measurement of contrast perception in dyslexia

Original Research Article

Vision Research, Volume 45, Issue 1, January 2005, Pages 1-8

James M. Gilchrist, Barbara K. Pierscionek, William M. Mann

2.

Visual Implicit Memory Deficit and Developmental Surface Dyslexia: A Case of Early Occipital Damage Original Research Article

Cortex, Volume 36, Issue 3, 2000, Pages 365-376

Stefan Samuelsson, Thomas R. Bogges, Thomas Karlsson

3.

Developmental dyslexia and spatial relationship perception Original Research Article

Cortex, Volume 48, Issue 4, April 2012, Pages 466-476

Carlo Aleci, Giulio Piana, Marzia Piccoli, Marco Bertolini

4.

The neurophysiological basis of the integration of written and heard syllables in dyslexic adults Original Research Article

*Clinical Neurophysiology*, Volume 124, Issue 2, February 2013, Pages 315-326

Maria Mittag, Paula Thesleff, Marja Laasonen, Teija Kujala

Highlights No difference in dyslexic readers between processing of syllables vs. scrambled images. Delayed MMN latencies in dyslexic individuals. A general audiovisual deficit in dyslexia.

5.

Dichotic listening performance under high and low lexical work load in subtypes of developmental dyslexia Original Research Article

Neuropsychologia, Volume 32, Issue 7, July 1994, Pages 757-785

O. Lamm, R. Epstein

6.

Dyslexia: A specific recoding deficit? an analysis of response latencies for letters and words in dyslectics and in average readers Original Research Article

Neuropsychologia, Volume 18, Issue 3, 1980, Pages 285-298

H. Bouma, Ch.P. Legein



7.

Is dyslexia caused by a visual deficit?

Vision Research, Volume 41, Issue 23, 1 October 2001, Pages 3069-3070

Bernt Christian Skottun

8.

The multi-sensory approach to the optometric management of children with specific learning difficulties (such as dyslexia and dyspraxia)

Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Pages 542-543

Annette R. Grounds

9.

Hemispheric differences in processing handwritten cursive Original Research Article

Brain and Language, Volume 102, Issue 3, September 2007, Pages 215-227

Joseph B. Hellige, Maheen M. Adamson

10.

Relative laterality of the N170 to single letter stimuli is predicted by a concurrent neural index of implicit processing of letternames Original Research Article

Neuropsychologia, Volume 51, Issue 4, March 2013, Pages 667-674

Courtney Stevens, Autumn McIlraith, Neal Rusk, Madison Niermeyer, Hannah Waller

Highlights ERPs were recorded in a one-back task with single letter and false font stimuli. Single letters elicited a bilateral enhancement of the N170. Letters preceded by a rhyming letter (e.g. e–c) tended to elicit an N450 rhyme effect. The N450 rhyme effect predicted relative left-laterality of the N170 to letters.

11.

Silent reading: Insights from second-generation deaf readers Original Research Article

Cognitive Psychology, Volume 15, Issue 1, January 1983, Pages 39-65

Rebecca Treiman, Kathryn Hirsh-Pasek

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The role of low-spatial frequencies in lexical decision and masked priming Original Research Article

Brain and Cognition, Volume 69, Issue 3, April 2009, Pages 580-591

C. Boden, D. Giaschi

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A preliminary investigation into the aetiology of Meares—Irlen syndrome Original Research Article

Ophthalmic and Physiological Optics, Volume 16, Issue 4, July 1996, Pages 286-296

B.J.W. Evans, A.J. Wilkins, J. Brown, A. Busby, A. Wingfield, R. Jeanes, J. Bald

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Optometric correlates of Meares—Irlen Syndrome: a matched group study Original Research Article

Ophthalmic and Physiological Optics, Volume 15, Issue 5, September 1995, Pages 481-487

Bruce J.W. Evans, Anne Busby, Rebecca Jeanes, Arnold J. Wilkins

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Hyperlexia profiles Original Research Article

Brain and Language, Volume 84, Issue 2, February 2003, Pages 204-221

Becky Kennedy

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Latencies of stimulus-driven eye movements are shorter in dyslexic subjects Original Research Article

Brain and Cognition, Volume 60, Issue 1, February 2006, Pages 64-69

Dorota B. Bednarek, Adam Tarnowski, Anna Grabowska

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The effect of spectral filters on reading speed and accuracy following stroke Original Research Article

Journal of Optometry, In Press, Corrected Proof, Available online 6 April 2013

Ian G. Beasley, Leon N. Davies

18.

The word-length effect in acquired alexia, and real and virtual hemianopia Original Research Article

Neuropsychologia, Volume 50, Issue 5, April 2012, Pages 841-851

Claire A. Sheldon, Mathias Abegg, Alla Sekunova, Jason J.S. Barton

Highlights

We examined the contribution of homonymous visual field loss to reading speed. We simulated hemianopia in healthy subjects with a gaze-contingent paradigm during an eye-tracking experiment. In healthy subjects, the 95% upper prediction limits were 51 ms/letter

with full fields and 161 ms/letter with simulated right hemianopia. With these criteria, we examined six paradigmatic patients with acquired peripheral alexias. In these subjects, our findings clarified the magnitude of the word-length effect that originates from hemianopia alone.

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Category-specific occipitotemporal activation during face perception in dyslexic individuals: an MEG study Original Research Article  
NeuroImage, Volume 19, Issue 3, July 2003, Pages 1194-1204  
A Tarkiainen, P Helenius, R Salmelin

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The influence of tinted lenses upon ocular accommodation Original Research Article  
Vision Research, Volume 41, Issue 9, April 2001, Pages 1229-1238  
Anita J. Simmers, Lyle S. Gray, Arnold J. Wilkins

21.

E-Z Reader: A cognitive-control, serial-attention model of eye-movement behavior during reading Original Research Article  
Cognitive Systems Research, Volume 7, Issue 1, March 2006, Pages 4-22  
Erik D. Reichle, Alexander Pollatsek, Keith Rayner

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Developmental dissociations between lexical reading and comprehension: Evidence from two cases of hyperlexia Original Research Article  
Cortex, Volume 46, Issue 10, November–December 2010, Pages 1238-1247  
Anne Castles, Alison Crichton, Margot Prior

23.

Phonological recoding and self-teaching: sine qua non of reading acquisition Original Research Article  
Cognition, Volume 55, Issue 2, May 1995, Pages 151-218  
David L. Share

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Chapter 9 - Disorders of higher visual processing  
Handbook of Clinical Neurology, Volume 102, 2011, Pages 223-261  
Jason J.S. Barton

25.

Predicting word decoding and word spelling development in children with Specific Language Impairment Original Research Article

Journal of Communication Disorders, Volume 44, Issue 3, May–June 2011, Pages 392-411

Marjolijn van Weerdenburg, Ludo Verhoeven, Anna Bosman, Hans van Balkom

Research highlights

We found relationships between language and literacy skills in children with SLI. Poor literacy skills were associated with poor phonological skills and rapid naming. Word-decoding development was rather autonomous. Spelling skills were causally related to verbal-sequential processing

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“Scientific roots” of dualism in neuroscience Review Article

Progress in Neurobiology, Volume 79, Issue 4, July 2006, Pages 190-204

Yuri I. Arshavsky

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Compensation in Reading Disabilities Original Research Article

Advances in Psychology, Volume 34, 1986, Pages 171-190

Ingvar Lundberg, Che Kan Leong

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Laterality Across the World's Languages

Encyclopedia of Language & Linguistics (Second Edition), 2006, Pages 709-719

J.B. Hellige, M.M. Adamson

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The role of selective attention on academic foundations: A cognitive neuroscience perspective Original Research Article

Developmental Cognitive Neuroscience, Volume 2, Supplement 1, 15 February 2012, Pages S30-S48

Courtney Stevens, Daphne Bavelier

Highlights

Selective attention is the ability to enhance relevant signals and manage distraction. The neural bases and development of this ability are well-understood. Further, selective attention appears to impact language, literacy, and math skills. These impacts can be related to specific neurobiological mechanisms. Selective attention can also be trained for the better

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Reading Disorders, Developmental  
Encyclopedia of the Human Brain, 2002, Pages 141-154  
Virginia A. Mann

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Spelling proficiency and sensitivity to word structure Original Research Article  
Journal of Memory and Language, Volume 24, Issue 4, August 1985, Pages 423-441  
F William Fischer, Donald Shankweiler, Isabelle Y Liberman

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Colored overlays enhance visual perceptual performance in children with autism spectrum disorders Original Research Article  
Research in Autism Spectrum Disorders, Volume 2, Issue 3, July–September 2008, Pages 498-515  
A.K. Ludlow, A.J. Wilkins, P. Heaton

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Connectionist natural language processing: the state of the art Original Research Article  
Cognitive Science, Volume 23, Issue 4, October–December 1999, Pages 417-437  
Morten H Christiansen, Nick Chater

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The origin of classical greek culture: the transparent chain theory of literacy/society interaction Original Research Article  
Journal of Social and Biological Structures, Volume 13, Issue 4, 1990, Pages 321-353  
John R. Skoyles, PL

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Strategic hand use preferences and hemispheric specialization in tactual reading: Impact of the demands of perceptual encoding Original Research Article  
Brain and Language, Volume 32, Issue 1, September 1987, Pages 97-123  
Jean M. Wilkinson, Thomas H. Carr

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Language in right-handers with right-hemisphere lesions: A preliminary study including anatomical, genetic, and social factors Original Research Article  
Brain and Language, Volume 20, Issue 2, November 1983, Pages 217-248  
Y. Joannette, A.R. Lecours, Y. Lepage, M. Lamoureux

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Language mechanisms and reading disorder: A modular approach Original Research Article  
Cognition, Volume 24, Issues 1–2, November 1986, Pages 139-168

Donald Shankweiler, Stephen Crain

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Language development and emergent literacy in preschool Original Research Article  
Seminars in Pediatric Neurology, Volume 9, Issue 3, September 2002, Pages 173-184

Barbara R. Foorman, Jason Anthony, Latrice Seals, Angeliki Mouzaki

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Educational Interventions in Learning Disabilities Original Research Article

Journal of the American Academy of Child & Adolescent Psychiatry, Volume 28, Issue 3, May  
1989, Pages 326-331

JANET W. LERNER

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The role of suppression in figurative language comprehension Original Research Article

Journal of Pragmatics, Volume 31, Issue 12, 2 November 1999, Pages 1619-1630

Morton Ann Gernsbacher, Rachel R.W. Robertson

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Principles of modern low vision rehabilitation Original Research Article

Canadian Journal of Ophthalmology / Journal Canadien d'Ophthalmologie, Volume 41, Issue 3,  
2006, Pages 289-312

Samuel N. Markowitz

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Chapter 12 - Modeling the effects of lexical ambiguity on eye movements during reading

Eye Movements, 2007, Pages 271-292

Erik D. Reichle, Alexander Pollatsek, Keith Rayner

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Frequency, Orthographic Regularity, and Lexical Status in Letter and Word Perception  
Original Research Article

Psychology of Learning and Motivation, Volume 15, 1981, Pages 163-200

Dominic W. Massaro, James E. Jastrzembski, Peter A. Lucas

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Picture book reading with young children: A conceptual framework Original Research Article  
Developmental Review, Volume 25, Issue 1, March 2005, Pages 64-103

Kathryn L. Fletcher, Elaine Reese

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Hyperlexia in a 4-year-old boy with Autistic Spectrum Disorder Original Research Article  
Journal of Neurolinguistics, Volume 19, Issue 4, July 2006, Pages 253-269

Keith Atkin, Marjorie Perlman Lorch

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Time-constrained functional connectivity analysis of cortical networks underlying  
phonological decoding in typically developing school-aged children: A  
magnetoencephalography study Original Research Article

Brain and Language, In Press, Corrected Proof, Available online 14 August 2012

Panagiotis G. Simos, Roozbeh Rezaie, Jack M. Fletcher, Andrew C. Papanicolaou

Highlights The study includes a large sample of elementary and middle school typical readers. MEG explores relative timing of neurophysiological activity during decoding. Activity progressed from visual association to temporoparietal to inferior frontal cortex. Functional associations between cortical regions were assessed in real-time. Result indicated bottom-up effects during the first 500 ms of pseudoword reading.

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The reciprocal relations between morphological processes and reading Original Research Article

Journal of Experimental Child Psychology, Volume 114, Issue 1, January 2013, Pages 10-34

Richard S. Kruk, Krista Bergman

Highlights

We model reciprocal relations in early reading and morphological processing. Initial morphological processes predict word decoding and reading comprehension. Reading comprehension predicts growth in decompose morphological processing. Early growth in morphological processes predicts later growth in reading. Universal patterns for each side of the reciprocal relationship are not indicated

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Alexia

Encyclopedia of the Neurological Sciences, 2003, Pages 85-87

Victor W. Henderson

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Unification of sentence processing via ear and eye: An fMRI study Original Research Article  
Cortex, Volume 47, Issue 4, April 2011, Pages 416-431

David Braze, W. Einar Mencl, Whitney Tabor, Kenneth R. Pugh, R. Todd Constable, Robert K. Fulbright, James S. Magnuson, Julie A. Van Dyke, Donald P. Shankweiler

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Agraphia

Encyclopedia of the Neurological Sciences, 2003, Pages 63-66

Victor W. Henderson

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Occipital Lobe

Encyclopedia of the Human Brain, 2002, Pages 677-715

Edgar A. Deyoe

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E-books effectiveness in promoting phonological awareness and concept about print: A comparison between children at risk for learning disabilities and typically developing kindergarteners Original Research Article

Computers & Education, Volume 57, Issue 3, November 2011, Pages 1989-1997

Adina Shamir, Inessa Shlafer

Highlights Educational e-books can promote emergent literacy among kindergarteners at risk for LD. Educational e-books promote most children's (at risk and not at risk for LD) phonological awareness in a similar way. Educational e-books improve CAP more for at risk than typically developing children.

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N.W. Bond and D.A.T. Siddle (eds.), Psychobiology: Issues and applications: (North-Holland Amsterdam 1989) pp. xv + 658, \$753.75

Biological Psychology, Volume 31, Issue 3, December 1990, Pages 293-294

Graham Turpin

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Eye Movements

Encyclopedia of Human Behavior (Second Edition), 2012, Pages 160-166

B. Bridgeman



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Reading disappearing text: Why do children refixate words? Original Research Article  
Vision Research, Volume 51, Issue 1, January 2011, Pages 84-92

Hazel I. Blythe, Tuomo Häikiö, Raymond Bertam, Simon P. Liversedge, Jukka Hyönä

Research highlights We measured adults' and children's eye movements as they read sentences containing either a long or a short target word; these sentences were presented either normally or as disappearing text. When reading disappearing text, 8/9-year-old children made fewer refixations but more regressions back to long words compared to when reading normal text; adults and 10/11-year-old children did not show this effect in regressions. These data show that the younger children required a second visual sample on long words, and they adapted their eye movement behaviour when reading disappearing text accordingly.

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Sentence complexity and input modality effects in sentence comprehension: an fMRI study  
Original Research Article

NeuroImage, Volume 22, Issue 1, May 2004, Pages 11-21

R.Todd Constable, Kenneth R Pugh, Ella Berroya, W.Einar Mencl, Michael Westerveld, Weijia Ni, Donald Shankweiler

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The role of sustained attention and display medium in reading comprehension among adolescents with ADHD and without it Original Research Article

Research in Developmental Disabilities, Volume 34, Issue 1, January 2013, Pages 431-439

Pnina Stern, Lilach Shalev

Highlights

We aimed at investigating the relation between sustained attention and reading comprehension and its relation to ADHD. Significant differences in reading comprehension and in sustained attention were obtained between the groups. Spacing and presentation type affected reading comprehension differentially according to the level of sustained attention.

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The role of prosody in silent reading Original Research Article

Language Sciences, Volume 9, Issue 2, October 1987, Pages 185-206

Shuhei Kadota

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Chapter 11 - Sensory Aids: Vision

Clinician's Guide to Assistive Technology, 2002, Pages 165-198

Diane C. Bristow, Gail L. Pickering

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Chapter 3 - CAPTCHAs: An Artificial Intelligence Application to Web Security

Advances in Computers, Volume 83, 2011, Pages 109-181

José María Gómez Hidalgo, Gonzalo Alvarez

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A Dimension of Child Psychiatric Technique Original Research Article

Journal of the American Academy of Child Psychiatry, Volume 11, Issue 1, January 1972,  
Pages 52-65

Carmen R. Goldings, Herbert J. Goldings

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Analysis of refractive & visual development from an infant screening programme

Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Pages 541-542

Annette R. Grounds

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Laterality

Encyclopedia of the Human Brain, 2002, Pages 671-683

Joseph B. Hellige

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Behavioral studies of aphasia: Methods of investigation and analysis Original Research  
Article

Neuropsychologia, Volume 9, Issue 2, June 1971, Pages 119-140

M. Sidman, L.T. Stoddard, J.P. Mohr, J. Leicester

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National academy of neuropsychology : Abstracts from the 12th annual meeting, Pittsburgh,  
PA, November 5, 6 & 7, 1992

Archives of Clinical Neuropsychology, Volume 8, Issue 3, May–June 1993, Pages 211-278

LaetitiaL. Thompson, B.P. Uzzell

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CHAPTER 1 - Massage and Healthcare: A Professional Perspective  
Clinical Massage in the Healthcare Setting, 2008, Pages 2-19  
Sandy Fritz, Leon Chaitow, Glenn M. Hymel

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Training of patients with age-related macular disease (AMD) using a scanner laser  
ophthalmoscope (SLO)  
Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Page 542  
L.E. Culham, F.W. Fitzke, J. Marshall

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The low vision distance telescope—how useful an aid?  
Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Page 542  
Martin P. Rubinstein, John B. Lowe

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Microcomputers and disabled people Original Research Article  
International Journal of Man-Machine Studies, Volume 17, Issue 1, July 1982, Pages 51-58  
Phil Odor

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Universal Design for Learning  
International Encyclopedia of Education (Third Edition), 2010, Pages 119-124  
D.H. Rose, J.W. Gravel

71.

Chapter 11 - Transitions into Higher Education  
Therapist's Guide to Learning and Attention Disorders, 2003, Pages 335-378  
Micki Bryant, Mark Turner, Aubrey H. Eine

72.

Understanding College Students with Learning Disabilities Review Article  
Pediatric Clinics of North America, Volume 52, Issue 1, February 2005, Pages 61-70  
Asiah Mason, Matthew Mason

#### Highlights

The percentage of full-time college freshmen reporting disabilities at 4-year institutions remained stable (6–8%) between 1988 and 2000. By 2000, two in five freshmen with disabilities (40%) reported having a learning disability. In 2002, learning disabilities accounted for 51% of special education classifications. The effects of chronic school failure frequently shape the experience of students with learning disabilities. This article reviews common learning disabilities found in college students and provides suggestions for helping these students.

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The perception of multiple objects: A connectionist approach: Michael C. Mozer  
Artificial Intelligence, Volume 62, Issue 1, July 1993, Pages 165-177  
Nigel H. Goddard

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Chapter 5 - Defining Inclusive Innovation  
Digital Outcasts, 2013, Pages 93-124  
Kel Smith

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A summary of recent developments in computer technology to aid the visually impaired in the workplace  
Ophthalmic and Physiological Optics, Volume 17, Issue 6, November 1997, Page 542  
Anna Joseph, Robert Harper

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Spelling development throughout the elementary grades: The Dutch case Original Research Article  
*Learning and Individual Differences*, Volume 18, Issue 4, 4th Quarter 2008, Pages 459-470  
Jos Keuning, Ludo Verhoeven

77.

Attention, intention and domain-specific processing Original Research Article  
*Trends in Cognitive Sciences, Volume 12, Issue 2, February 2008, Pages 59-64*  
Matthew Finkbeiner, Kenneth I. Forster

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Preparing teachers to remediate reading disabilities in high school: What is needed for effective professional development? Original Research Article  
*Teaching and Teacher Education, Volume 24, Issue 4, May 2008, Pages 1083-1097*  
Maureen W. Lovett, Léa Lacerenza, Maria De Palma, Nancy J. Benson, Karen A. Steinbach, Jan C. Frijters

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Tests of the E-Z Reader model: Exploring the interface between cognition and eye-movement control Original Research Article  
*Cognitive Psychology, Volume 52, Issue 1, February 2006, Pages 1-56*  
Alexander Pollatsek, Erik D. Reichle, Keith Rayner

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Enhanced recognition of written words and enjoyment of reading in struggling beginner readers through whole-word multimedia software Original Research Article  
*Computers & Education, Volume 54, Issue 1, January 2010, Pages 199-208*  
Arjette Karemaker, Nicola J. Pitchford, Claire O'Malley

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An Adaptive Resonance Theory account of the implicit learning of orthographic word forms Original Research Article  
*Journal of Physiology-Paris, Volume 104, Issues 1–2, January–March 2010, Pages 19-26*  
H. Glotin, P. Warnier, F. Dandurand, S. Dufau, B. Lété, C. Touzet, J.C. Ziegler, J. Grainger

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A Study of Voice-Recognition Software as a Tool for Teacher Response Original Research Article  
*Computers and Composition, Volume 25, Issue 2, 2008, Pages 165-181*  
Thomas Batt, Sandip Wilson

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Attenuating Interference During Comprehension: The Role of Suppression Original Research Article

*Psychology of Learning and Motivation, Volume 37, 1997, Pages 85-104*

Morton Ann Gernsbacher

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Phonological awareness of children with Down syndrome: Its role in learning to read and the effectiveness of related interventions Review Article

*Research in Developmental Disabilities, Volume 31, Issue 2, March–April 2010, Pages 316-330*

Christopher J. Lemons, Douglas Fuchs

***Kommentarer til treff:***

Det foreligger ingen funn med det fokus vi har på vårt søk.

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