

Travel to School Survey: Validation and testing of Hands-Up methodology in primary schools in Wales

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Session

20 minutes

- Why travel to school is important
- Why we need a travel to school survey
- Research study methodology
- Study sample and overall results
- Future of the “Travel to School Hands-Up Survey”

Sesiwn

20 munud

- Pam mae teithio i'r ysgol yn bwysig
- Pam mae angen arolwg teithio i'r ysgol
- Methodoleg astudio ymchwil
- Sampl astudiaeth ymchwil a canlyniadau cyffredinol
- Dyfodol yr “Teithio I'r Ysgol Arolwg Dwylo Fyny”

Background

Active travel to school

Those who walk or cycle to school achieve about **20 minutes extra physical activity** per day than children who are driven there.

(Davidson, K.K. et al. 2008)



Walking and cycling are zero emission forms of transport

and increasing journeys made by these modes will help achieve air quality standards and reduce carbon emissions.

(The Air Quality Standards (Wales) Regulations 2010)



Active Travel (Wales) Act 2013 places duties on local authorities in Wales, to enable more people to enjoy the benefits of walking and cycling.



Walking and cycling helps make people and communities feel more connected. It can increase people's sense of inclusion and perceptions of safety.



Cefndir

Teithio gweithredol i'r ysgol

Mae'r plant sy'n cerdded neu'n beicio i'r ysgol yn llwyddo i gyflawni tua

20 munud mwy o weithgarwch corfforol

bob dydd na'r plant sy'n teithio yno yn y car.

(Davidson, K.K. et al. 2008)



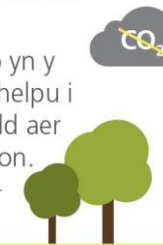
Mae Deddf Teithio Llesol (Cymru) 2013 yn gosod dyletswyddau ar awdurdodau lleol yng Nghymru, i alluogi rhagor o bobl i fwynhau buddion cerdded a beicio



Mae cerdded a beicio yn ddulliau trafndiaeth sy'n rhyddhau sero allyriadau wrth deithio

a thrwy gynyddu teithio yn y dulliau hyn byddwn yn helpu i fodloni safonau ansawdd aer a lleihau allyriadau carbon.

(Rheoliadau Safonau Ansawdd Aer (Cymru) 2010)



Mae cerdded a beicio yn helpu pobl a'r gymuned i deimlo'n fwy cysylltiedig. Gall gynyddu ymdeimlad pobl o gynhwysiant a'u canfyddiad o ddiogelwch.



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Background

Why a new survey?

- Challenges with existing data sources
- Reduction in active travel to school rates
- School level data as catalyst for action

Cefndir

Pam arolwg newydd?

- Heriau gyda'r ffynonellau data cyfredol
- Mae teithio gweithredol i'r ysgol yn lleihau
- Data ysgol fel sbardun ar gyfer gweithredu

Background

Need for research study

- Hands-Up methodology in widespread use
- No evidence of validation or evaluation
- Single day versus usual measures
- Welsh language



Cefndir

Angen astudiaeth ymchwil

- Mae arolygon “Dwylo Fyny” yn ddull poblogaidd
- Dim tystiolaeth o ddilysu na gwerthuso
- Diwrnod sengl yn erbyn mesurau arferol
- Iaith Cymraeg

Study methodology

Overarching



Primary objective

- Assess the test-retest reliability and concurrent validity of the question 'How do you normally travel to school' by assessing the degree of agreement between pupil and parent/guardian responses.



Secondary objective

- Assess the feasibility of the Travel to School Hands Up Survey methodology in a school setting



Research elements

- Reliability
- Validity
- Feasibility

Methodoleg astudio

Yn gyffredinol

Amcan cynradd

- Aseu dibynadwyedd a dilysrwydd y cwestiwn "sut ydych chi fel rheol yn teithio i'r ysgol?" trwy aseu graddau'r cytundeb rhwng ymatebion disgyblion a rhiant / gwarcheidwad.



Amcan uwchradd

- Aseu ymarferoldeb methodoleg yr arolwg mewn ysgol



Meysydd ymchwil

- Dibynadwyedd
- Dilysrwydd
- Ymarferoldeb



Study methodology

Reliability

- All children participating in the study answered the Travel to School Hands Up Survey question at two time points during one day
- Chi squared – Fisher’s Exact Test: used to determine any statistical significance between the children’s morning and afternoon responses

Methodoleg astudio

Dibynadwyedd

- Gofynnwyd i bob plentyn a gymerodd ran yn yr astudiaeth gwestiwn yr arolwg ddwywaith mewn un diwrnod
- Chi squared – Fisher’s Exact Test: penderfynu ar arwyddocâd ystadegol rhwng ymateb plant i'r arolwg yn y bore ac yn y prynhawn

Study methodology

Validity

- Child-parent dyads recruited
- Children's responses were compared with those of their parent/guardian
- Kappa statistic:
used to determine concurrent validity by assessing the strength of agreement between pupil and parent/guardian responses

Methodoleg astudio

Dilysrwydd

- Parau plant-rhiant wedi'u recriwtio
- Cymharwyd ymatebion plant â rhai eu rhiant / gwarcheidwad
- Kappa statistic:
penderfynu dilysrwydd trwy asesu cryfder y cytundeb rhwng ymatebion plant a rhiant / gwarcheidwad

Study methodology

Feasibility

School staff were part of a process evaluation

- Classroom observation – qualitative thematic analysis of researcher narratives
- Teacher questionnaires
- Assessment of study implementation processes

Methodoleg astudio

Ymarferoldeb

Roedd staff yr ysgol yn rhan o werthusiad proses

- Arsylwi yn yr ystafell ddosbarth - dadansoddiad thematig ansoddol o ddarluniau ymchwilyr
- Holiaduron athrawon
- Aseu prosesau gweithredu astudio

Study sample

- 13 primary schools (Gwynedd, Swansea, Carmarthenshire)
- 7 Welsh medium and 6 English medium
- 704 pupils: child-child reliability
- 283 successful child-parent dyads: concurrent validity
- 65 classroom observations
- 27 teacher questionnaires

Sampl astudiaeth ymchwil

- 13 ysgol gynradd (Gwynedd, Abertawe, Sir Gaerfyrddin)
- 7 cyfrwng Cymraeg a 6 cyfrwng Saesneg
- 704 o ddisgyblion: dibynadwyedd plentyn-plentyn
- 283 parau plant-rhiant: dilysrwydd
- 65 arsylwi yn y dosbarth
- 27 o holiaduron athrawon

Overall results

High reliability

- No significant difference in the proportions of children reporting each travel mode morning and afternoon ($p=0.913$)
- Reliability not affected by the child's age, or by the language medium of survey delivery

Canlyniadau cyffredinol

Dibynadwyedd uchel

- Dim gwahaniaeth arwyddocaol yn y cyfrannau o blant sy'n adrodd am bob dull teithio bore a phrynhawn ($p=0.913$)
- Ni effeithiwyd ar ddibynadwyedd gan oedran y plentyn, neu gan gyfrwng iaith yr arolwg

Overall results

Very-good / good validity

- Strength of agreement between child and parent/guardian responses was good
(k value 0.73; CI [0.65, 0.82])
- Language medium of the school does not affect results
- Slightly greater strength of agreement for Year 5 than for Year 3 – not statistically significant

Canlyniadau cyffredinol

Dilysrwydd da iawn / da

- Roedd cryfder y cytundeb rhwng ymatebion plentyn a rhiant / gwarcheidwad yn dda
(k value 0.73; CI [0.65, 0.82])
- Nid yw cyfrwng iaith yr ysgol yn effeithio ar y canlyniadau
- Cryfder ychydig yn fwy o gytundeb ar gyfer Blwyddyn 5 na Blwyddyn 3 - nid yn ystadegol arwyddocaol

Overall results

Feasible to deliver

- Administration is feasible in a classroom setting.
- 78% of teachers agree that an annual survey is a worthwhile activity.
- Time efficient: 6 minutes (median)
- Important elements:
 - classroom environment
 - teacher preparation & delivery
 - children's understanding & response

Canlyniadau cyffredinol

Ymarferol i'w wneud

- Mae gweinyddu'r arolwg yn ymarferol mewn ystafell ddosbarth
- Mae 78% o athrawon yn cytuno bod arolwg blynyddol yn weithgaredd gwerth chweil
- Amser effeithlon: 6 munud (canolrif)
- Themâu pwysig:
 - amgylchedd dosbarth
 - paratoi athrawon a sut maen nhw'n gweinyddu
 - dealltwriaeth ac ymateb y plant

Conclusion

Future of the survey



Establishment of annual "Travel to School Hands-Up Survey"

- Refine tools and methodology
- School led activity each September



Phased implementation

- Testing scalability and local delivery structures



Using data to promote healthy behaviours

- Information for local planning, action and evaluation
- Contribution to Curriculum: Health and Wellbeing Area of Learning and Experience
- National scheme requirements

Casgliad

Dyfodol yr arolwg

"Teithio I'r Ysgol Arolwg Dwylo Fyny" blynyddol

- Mireinio offer a methodoleg
- Gweithgaredd dan arweiniad yr ysgol - bob mis Medi



Gweithredu fesul cam

- Profi graddfa a strwythurau gweinyddu lleol



Defnyddio data i hyrwyddo ymddygiad iach

- Gwybodaeth ar gyfer cynllunio, gweithredu a gwerthuso lleol
- Cyfraniad I cwricwlwm newydd: Maes Dysgu a Phrofiad Iechyd a Lles
- Gofynion y cynllun cenedlaethol





**Thank you
Questions?**

**Diolch
Cwestiynau?**