

The part schools can play in sustainable transport education

Gary Cummins, JMP Consultants, and Tony Maric, Perth & Kinross Council

1 Introduction

The school run and its contribution to the wider problems around urban transport, air pollution, road danger and localised congestion is now a fact of life in many Scottish towns and cities.

Targeting drivers making the school run is probably the highest profile example of where the implementation of travel behaviour change measures can have a welcome and very visible effect. Some local authorities resort to employing security guards or request support from the local police to enforce existing parking restrictions. In a recent and well publicised case, road closures have been enacted to stop drivers from even approaching a school entrance area at all.

But the school run is a very easy target, forming as it does an axis of evil made up of a travel planner's bêtes-noires; indiscriminate parking, dangerous driving and in some but not all cases, lazy parents. The problem is well known, unlikely to go away any time soon and while very unpopular with those who experience its negative effects, it is still a long way from being socially unacceptable.

But the support that schools can provide in promoting awareness of sustainable transport issues is potentially much greater than the fifteen minute post-breakfast dash and drop-off at the school gates. Actively engaging with young people to raise awareness of particular social issues is now carried out by a range of organisations including national governments up to the United Nations.

This paper discusses how JMP working with Perth & Kinross Council (PKC) has used primary school classroom workshops to promote awareness of active travel, local air quality issues and public transport options to school pupils, their families and the broader community.

2 Schools as a gateway to community engagement

Using schools as a gateway to promote awareness of particular social issues has had a long and successful history.

Well known social campaigns such as Keep Britain Tidy, which began nearly 60 years ago as an anti-litter campaign, went on to become an environmental awareness organisation and now engages with schools directly via the Eco-Schools programme.

Some delegates may remember that following the outbreak of Dutch Elm disease in the early 1970's, millions of trees across the UK died or were felled. The Forestry Commission donated some 90,000 trees to schools across the country in a well publicised nationwide replanting campaign using the catchy title 'Plant a tree in '73', repeated a year later and promoted as 'Plant one more in '74'.

More recently, the British Heart Foundation has developed a website and package of resources designed for use by schools and young people to highlight the issues around heart disease and

smoking. These include children's party packs, activities and online games which challenge players to stub out smoking.

Therefore, engaging with children and schools in order to raise awareness of social issues is not without precedent. It is an engagement pathway that delivers benefits and has been used many times by various organisations. Our experience gained while working with schools concurs with this.

3 The development of a school specific programme

The programme of workshops discussed in this paper was initially developed by JMP from a series of school engagement sessions delivered in Dundee in 2009 as part of that city's Smarter Choices – Smarter Places programme called Dundee Travel Active (DTA). The project aimed to:

“Increase levels of active travel to improve the physical health and mental wellbeing of residents of and visitors to Dundee”.

It contained a large social marketing element which was designed to be implemented via a series of pathways to reach particular target groups, including schools and school children amongst others.

JMP staff based in Dundee were fortunate in building early links with a Dundee City Council officer (a primary school teacher who had been seconded into a temporary Health and Wellbeing post). This officer not only supported our programme's aims, but helped gain access to the schools located in our project target areas.

Once the project aims had been discussed with teaching staff, links to aims and themes within the Curriculum for Excellence (CfE) were also identified. This approach, linking the school workshop programme with themes within the CfE helped steer all future workshop programme development.

Initially, the sessions were created to engage with pupils in the classroom environment through a programme of interactive workshops and all-school assemblies. Advice from teaching staff suggested that breaking the programme up into short, lively elements was likely to be the best way to get our messages over. We were also conscious that we wanted our messages to reach pupils' family groups at home and this element of the workshops is the one that changed the most over time. Now, getting the message home forms the core target of any school workshops that we deliver.

The evolving classroom workshop activities had to reflect the project theme while benefitting children, but also ensure the programme messages were not lost in what could become a series of fun but purposeless classroom activities.

Our first workshop delivery sessions made use of four 15 minute activities running concurrently. Pupils in a class of, for example, 28 children were divided into groups of seven and spent 15 minutes on a task carrying out one activity before moving onto another at a given signal, similar to a circuit training session. This gave us a lively workshop session but meant we needed four separate activities at every session. It was challenging to manage and a lot of time was spent on setting up each task theme on a single desk.

Nevertheless the workshops were popular with teaching staff and this gave us the confidence to believe that the school specific elements of the DTA programme could be developed further. So long as care is taken to ensure that the elements clearly demonstrate an appropriate aim and linkages with objectives within the CfE, the school workshops could become a keystone element of future social marketing projects delivered by JMP.

4 Perth on the go school workshops

In August 2013 Perth & Kinross Council (PKC) were awarded funds from sources, including the Scottish Government's Air Quality Grant to Support Air Quality Action Plan Measures, for the development and implementation of a social marketing campaign to encourage increased uptake of sustainable travel choices in Perth.

JMP was appointed to assist with both the development and early implementation of the campaign which was branded Perth on the Go (PotG). The campaign's primary objective was to reduce traffic volumes in some of those areas where air pollution was most problematic. Atholl Street in Perth is, unfortunately for the city, Scotland's fifth most polluted street.

The school workshops were to form one particular branch of a broader social marketing programme and were intended to target P4-P7 age groups as our experience suggests these groups are the most responsive to our workshop programme.

The school workshop elements of a social marketing programme are an enjoyable and rewarding element of project delivery. As soon as a project has been commissioned we make contact with the schools we intend to engage with. From the outset the purpose and expected outcomes of the workshops are made clear to the teaching staff who are supplied with a summarised version of the actual classroom delivery programme, along with examples of resources.

The school workshops can be a standalone project or (more frequently) part of a broader social marketing programme. The workshop starting point is always 'What do we want to get out of this?' After considering the required messages that we want to pass onto pupils and their family groups, resources are developed that will be used during the workshops.

5 Bespoking the programme

PotG initially targeted the town of Scone, and the Gannochy, Kinnoull and Bridgend areas of Perth. These areas form part of the commuter transport corridor that contributes to the air quality issues that PotG sets out to target.

This corridor is also served by the Stagecoach Goldline Service 7 bus, a diesel electric hybrid vehicle operating at a 10 minute frequency during working hours.

Robert Douglas Memorial School, locally known as RDM is the only primary school in Scone. We made contact with the school: explained what we wanted to do; what PKC aims were; how our workshops could contribute to outcomes in the CfE and the school was happy to engage with us.

A timetabled workshop programme was developed to deliver air quality and active travel workshops to all P4-P7 classes, seven classes in total at the school. This was again cleared with the school Head teacher and teaching staff and we began the programme.

6 Workshop delivery

Workshops always begin with an introduction, we explain to pupils who we are, and why we are visiting the school.

From this point the nature of the sessions varies a little according to the ages of the children but each class is encouraged to discuss: the causes of air pollution; where it comes from; how pollution is a fact of life; but still something we need to manage. We also talk about the two major air pollutants in Perth, nitrogen dioxide and particulate matter.

Primary school children are surprisingly aware of these issues, although they may be initially reluctant to ask questions. Our staff adopt a system of reflective learning, continually asking questions of pupils and never lecturing.

Via fluid discussion children are informed of the impacts that air pollution has on health, the environment, and how transport contributes to these problems. Very simple but effective visual aids are invaluable at this point. As an example, to make pupils aware of the issues of air pollution in the 21st century we use two contrasting images of Dundee taken from the same location but with around 80 years between them (no similar images of Perth being available).

We ask pupils to compare the visibly polluted image in one picture with the second modern image of an apparently pollution free city. This helps us explain that modern pollutants are largely invisible. Using handouts and crib sheets we set pupils practical tasks of personalising the pollutant characters that we had discussed earlier (as shown in Figure 1).

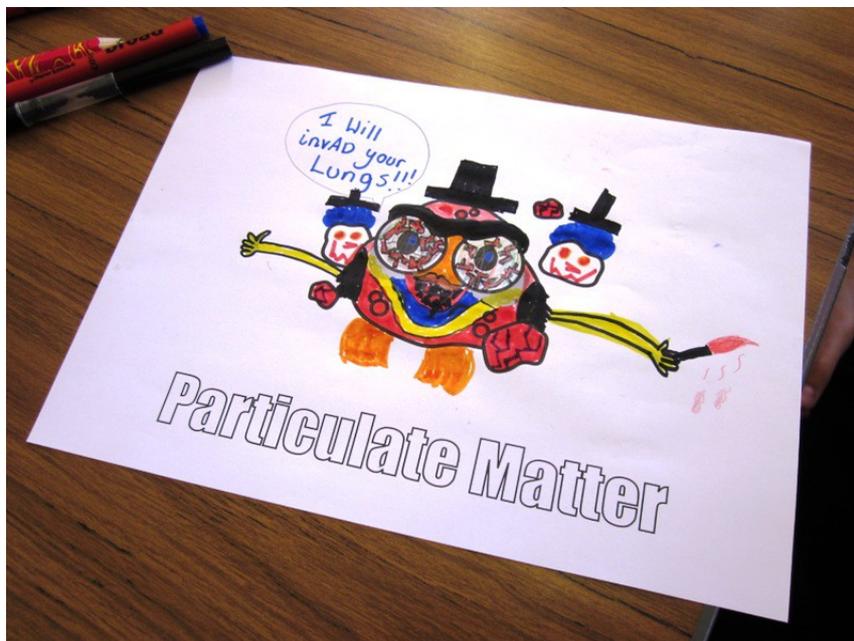


Figure 1. Air pollutant character

Pupils quickly pick up on appropriate themes for each character. Adding factory chimneys, bloodshot eyes, wings to show how particulates may be airborne and occasionally word balloons.

These drawings are kept by pupils and our messages begin to be taken home.

Another air quality task particularly popular with pupils, is identifying how polluted a location shown in a photograph may be on a scale of 1-10.

Pupils are encouraged to discuss where these may appear on an air quality scale. This task can produce robust debate, with pupils discussing where a picture may go, why it is there, and even discussing what other external factors (not necessarily shown in the picture) may potentially be taking place. Figure 2 shows this session taking place.



Figure 2. Air pollution session

When working with pupils we find it helps to explain things using a physical metaphor, therefore if we say;

'Every day a child takes around 20,000 breaths'

It helps to follow this statement with;

'Over a month you all breathe enough air to fill a swimming pool the size of Perth Leisure Pool.'

Pupils can easily relate to physical examples such as these. Activities relating to travel and transport can be equally popular with pupils when approached in a fun and interactive way.

Like other organisations we use hands-up surveys as a way of capturing pupil's travel choices, but with a little imagination a survey can be adapted into a workshop session and provoke discussion on daily travel habits.

For P4-P5 pupils we use a Travel Trail activity. Each pupil is provided with a paper character indicating their travel to school mode that day, pupils are asked to colour their character in based on how sustainable the mode they have taken is.

All schools enjoy the Travel Trail task, the results are colourful (as shown in Figure 3) and it is fun to do, we find schools keep the Travel Trail on their walls weeks after we have completed workshop sessions.

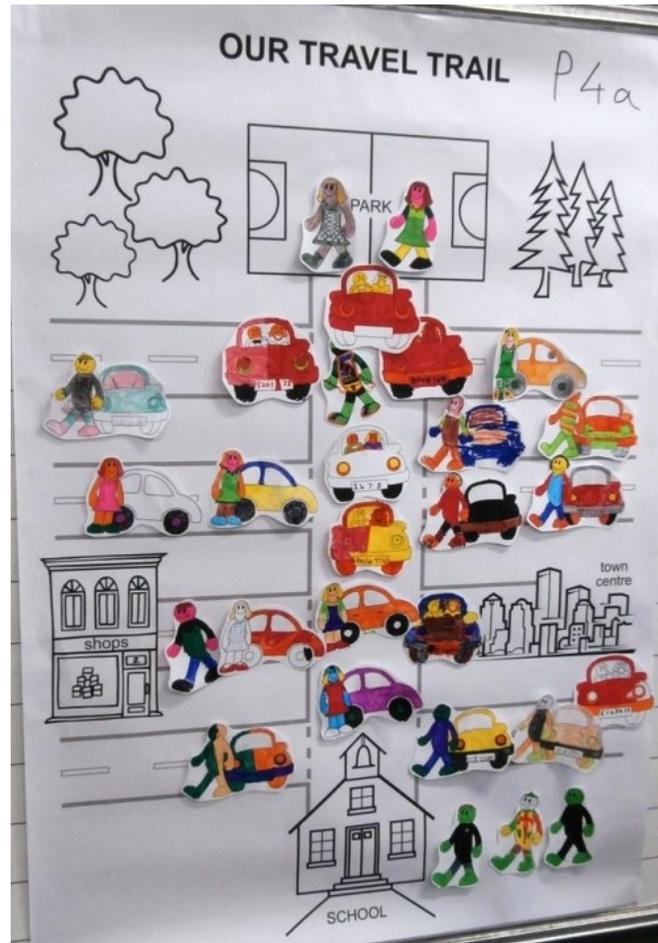


Figure 3. Example of Travel Trail

For older pupils we have developed journey planning lessons using tactran connect, walkit.com and Traveline Scotland websites. Pupils are taken step by step through the journey planning software. These lessons can be difficult to control as pupils naturally become excitable and noisy when working on computers, and individual computers can operate at different speeds, meaning some pupils need to wait for other pupils' machines to load pages.

However, once pupils have followed a single journey planning task, they learn quickly and will enthusiastically plot a journey of their own from, for example, a relative's house to the swimming pool, park or library. A journey planning lesson is shown taking place in Figure 4.

Watching teaching staff controlling pupils is an enlightening and fulfilling experience, we learned how to do this by watching how individual teachers can keep a class of 30-plus eight-year-olds quiet, yet fully engaged and at the same time buzzing with questions. Primary teaching staff rarely raised their voices in our sessions, but deal with too much noise by a hand clapping signal, which pupils know to respond to, or a statement made in a slightly raised voice, such as 'Hocus Pocus everybody focus' – which pupils repeat, followed by a silence.



Figure 4. Journey planning lesson

7 On bus session

JMP developed on bus workshops while delivering ‘transition class’ workshops for schools in Dundee. The purpose of those workshops were to prepare pupils for regular travel to secondary school by bus. Pupils learnt about sensible bus behaviour and met and chatted to bus staff. It was hoped that by humanising staff, this would lead to pupils showing a little more respect to bus drivers in the future. Both National Express and Stagecoach have supported these initiatives in the past.

For the Perth target travel corridor, the fact that Service 7 used hybrid buses meant that this feature could be incorporated into the workshop sessions. Again, very basic picture graphics were created to provoke discussion around hybrid engines, how they work, why they create less pollution and how they generate some of their own electrical energy via regenerative braking. We included a physical demonstration of the principles of regenerative braking during the workshops.

Pupils also enjoyed taking a walk out of class and onto a bus to meet a driver and were keen to participate in a very lively Q&A session about bus travel.

As well as the pupils, teaching staff join in these sessions and most came away from the workshops enlightened. Stagecoach have a policy of not leaving a child at a bus stop who is alone and without a fare. Drivers are instructed to give reasonable assistance to children who may be in difficulties or are unable to get home, this commonsense advice was made clear to pupils and teachers along with a caveat that it is not a licence for free travel.

Other things discussed on the buses are appropriate behaviour, safety and common sense when stopping, boarding or alighting from a bus, and again, we use demonstrations to make the session as visual and interesting as possible. An on bus session in progress is shown in Figure 5.



Figure 5. On bus session

One very effective demonstration is to select the smallest pupil in the class and do a walk round of the bus with them. We ask them to stand at the front of the bus and wave at their classmates. With the younger pupils, sometimes this is the only way they can be seen.

This proved to be a fun, yet very effective way of reinforcing the message regarding not running out in front or behind a bus.

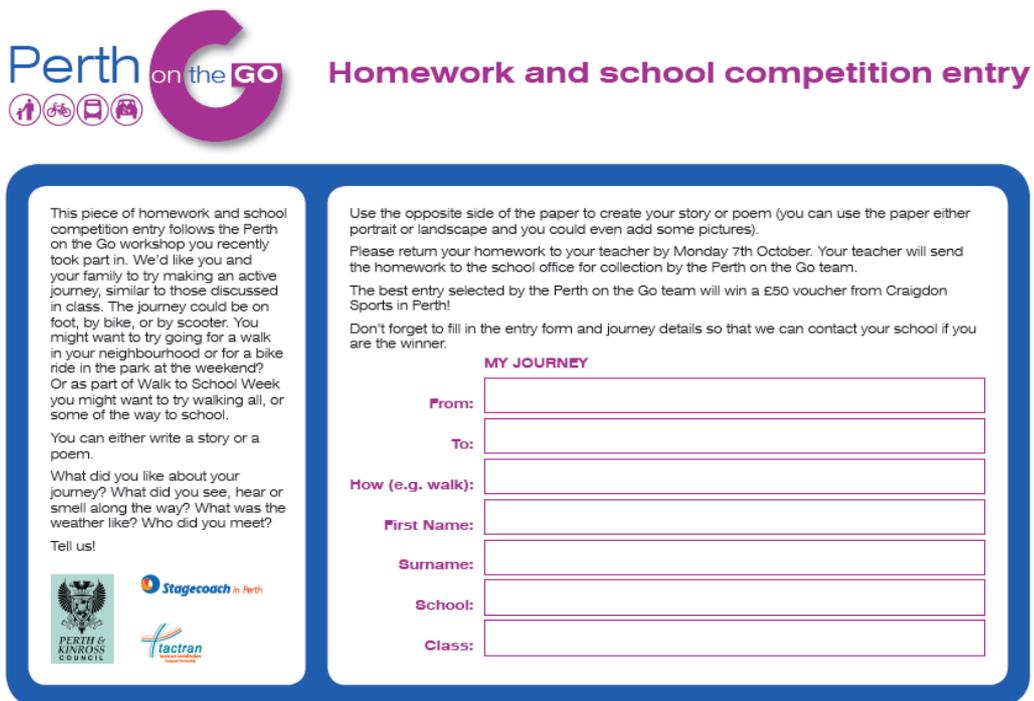
8 Getting the messages home

Getting the message home to each pupil's family is our programme's core aim. Of course primary age children do not make their own travel choices, but they may be able to influence their parent's travel choices. Where we can we create resources in the form of homework tasks and/or information handouts for pupils to use to engage their broader family groups into the project.

PKC have an air quality section within their website, this has a sub-section containing children's activities including an interactive real-time Air Pollution Scale. Following the air quality workshops pupils were given screenshot handouts of the air quality homepage.

During the workshops we suggest pupils go online, look up the homepage and check pollution levels in Perth for that day.

We also supply handouts to pupils with addresses of the journey planning sites we use in class, we encourage pupils to go home and plot a journey for their family to make in their own time. As a final handout JMP produce homework task sheets (shown in Figure 6).



Perth on the GO Homework and school competition entry

This piece of homework and school competition entry follows the Perth on the Go workshop you recently took part in. We'd like you and your family to try making an active journey, similar to those discussed in class. The journey could be on foot, by bike, or by scooter. You might want to try going for a walk in your neighbourhood or for a bike ride in the park at the weekend? Or as part of Walk to School Week you might want to try walking all, or some of the way to school.

You can either write a story or a poem.

What did you like about your journey? What did you see, hear or smell along the way? What was the weather like? Who did you meet?

Tell us!

Use the opposite side of the paper to create your story or poem (you can use the paper either portrait or landscape and you could even add some pictures).

Please return your homework to your teacher by Monday 7th October. Your teacher will send the homework to the school office for collection by the Perth on the Go team.

The best entry selected by the Perth on the Go team will win a £50 voucher from Craighdon Sports in Perth!

Don't forget to fill in the entry form and journey details so that we can contact your school if you are the winner.

MY JOURNEY

From:

To:

How (e.g. walk):

First Name:

Surname:

School:

Class:

Logos: Perth & Kinross Council, Stagecoach in Perth, tactran

Figure 6. Homework task sheet

For RDM school the homework task asked the pupils to make an active journey similar to those discussed in class with their families and write about this journey, pupils could write either a story or a poem and add pictures if they wish. At RDM the homework was incentivised with a prize of a gift voucher from a local outdoor shop.

9 Walk to school week

Another way of getting the message home to families is to run a special Walk to School Week event during the week following our workshop delivery. This is intended to help carry the message, delivered as part of our workshops to all classes in our host school.

Special resources are produced including wall charts and stickers for every class in the school and leaflets for pupils to take home. Trial and error has taught us to produce instruction sheets for teaching staff too. Children that do need to be driven for some of their journey to school are encouraged to 'park and stride' from locations some distance from the school. These events are opportunities to generate good press coverage for the programme.

10 Evaluation

Approximately 740 children of RDM, Kinnoull, North Muirton, St Ninian's, Balhousie and St John's primary schools received in-class and on-bus lessons about air quality, the benefits of active and sustainable travel and about diesel bus or hybrid bus technology. The sessions were universally well received by pupils and teaching staff.

Evidence that the information provided stuck with at least some pupils is indicated by several of the children as well as their teachers specifically mentioning to our staff, on the day after their in-class

sessions, that pupils had checked the levels of air pollution in Perth from the Council's website the previous evening.

All these children were also given Perth on the Go-related homework activities, which both reinforced the lessons learned at school but also gave exposure to the campaign and benefits of sustainable travel to their family groups.

Innovative ideas resulting from homework tasks included one pupil's suggestion of a car key amnesty for parents, and dog rental stations in public parks. The latter offering members of the public the opportunity to 'rent a dog' for a short period, the dog helping keep walkers company during a stroll in the park.

Pupils of all participating schools (other than Kinnoull) (totalling around 1140) took home a copy of the walk (or otherwise travel sustainably) to school week flyer, raising awareness of the campaign to a large proportion of households in those schools' catchment areas.

The walk to school week activities achieved a substantial increase in the proportion of children travelling sustainably to school.

At RDM school, on the days of their in-class workshops (which the children had not been pre-notified of, so these can be taken to be typical days in terms of journey choices), an average of 66% of the children of the seven classes walked, cycled, scooted, used the bus or park & strode to school. Across the five days of walk to school week, this proportion increased to 85%. This increase (of 19 percentage points, or of 28% more children travelling sustainably) is considered to be a great result in a school that had a reasonably high baseline of sustainable travel. According to our data, the proportion of children being driven to school fell by more than half during walk to school week (from 34% to 15%).

11 Summary and conclusions

For many years schools have been used as a conduit to support the delivery of information promoting social change and frequently welcome the opportunity to engage with these initiatives, particularly if the target outcomes also serve the school's interests, which was the case in Perth.

Well designed resources which support outcomes within the CfE are essential components in the delivery of workshop sessions, as are experienced staff who are comfortable working with Primary age pupils.

Pupils will enthusiastically engage with these sessions subject to the content and delivery being interesting and well presented and will also continue to follow up the workshop activities out of school if encouraged to do so.

The school workshops and on-bus sessions offer a number of opportunities to gain favourable press coverage not only for the school sessions but for the broader project initiatives.

Based upon the information received to date the workshops are contributing to an increase in active travel at the schools they have been delivered to. Engaging with communities through primary schools is proving to be a cost effective mechanism to change travel behaviours, which can add significant support to a broader social marketing campaign.

Acknowledgements

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