Transferring personal hygiene and sanitation education (PHASE): South to North

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GlaxoSmithKline's (GSK) hygiene initiative is PHASE, Personal Hygiene and Sanitation Education, a simple and successful handwashing programme developed alongside children and their teachers for implementation in and through schools. Active since 1998, it is currently implemented in 15 international development settings. An evaluation of PHASE reported that the programme had proved to be highly effective and amenable to cross-cultural adaptation. PHASE is currently being transferred to UK primary schools with development taking place in London. During this process issues of 'South to North' knowledge transfer (experience, relevance and acceptance) have become key to the design and execution of the programme. This article reports work in progress.

Keywords: hygiene education, handwashing, Early Years Foundation Stage, South to North knowledge transfer

PHASE, Personal Hygiene and Sanitation Education, is a handwashing programme developed alongside children and their teachers for implementation in schools in developing countries. In 2007 a review found a programme 'highly effective and amenable to cross-cultural adaptation' with partners reporting it to be successful in an extremely diverse mix of geographical, economic, political and social contexts (GSK, 2007). These factors and GlaxoSmithKline's (GSK) experience of also supporting science education in developed countries, has resulted in the current exploration of how PHASE might be transferred by GSK to UK, and potentially US primary schools.

In doing so it is clear that international development has few documented examples of 'South to North' methodology and/or knowledge transfer. It is not known if this is due to an absence of enquiry by researchers and practitioners in 'developed' world settings or the openness of 'experts' in the North to what is known by those working in developing countries. Conversely those working in development focus on the specialized nature of developing country institutional

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and operational environments, thus their exchange of knowledge including criteria for success, is typically horizontal (South to South).

The paper has three objectives: to report initial development of PHASE in the UK introducing the project's structural and creative form; to discuss some of the issues involved in bringing the work 'North'; and to highlight the significant gap in collective know-how about South to North knowledge transfer.

The paper looks first at PHASE in developing countries and criteria for success.

PHASE in developing countries

Launched in Kenya in 1998, PHASE has since been introduced in Bangladesh, Bolivia, Brazil, India, Indonesia, Malawi, Mexico, Nicaragua, Peru, Philippines, Senegal, Tajikistan, Uganda and Zambia. Facilitated in rural areas and urban slums, the programme has evolved through its implementing partners: AMREF (African Medical and Research Foundation), Save the Children, Millennium Villages Project, Plan International, Pratham and Ministries of Health and Education.

PHASE aims to reduce diarrhoea-related disease and to improve children's overall health and well-being

PHASE is about child-led participatory learning for behaviour change. Providing guidance on the importance of handwashing with soap and other hygiene practices, PHASE aims to reduce diarrhoea-related disease associated with poor hygiene and to improve children's overall health and well-being. As with most participatory approaches, PHASE takes a number of forms, yet in every setting it remains true to

The PHASE programme being implemented in Mexico

Children's individual and collective power can bring lasting change to whole communities

PHASE materials typically include cloth books, wall charts, flash cards, poster flip-charts and story cards

its core belief: the voice of children and their individual and collective power to effect lasting change that bring benefits to whole communities. In the classroom PHASE adapts to its environment, supporting the curriculum and promoting behaviour change through common messages and locally produced images designed in consultation with children. Taking into account different learning preferences, PHASE materials typically include cloth books, wall charts, flash cards, poster flip-charts and story cards. Most importantly PHASE is about children learning with and from their peers.

Measuring the success of PHASE

Indicators of success typically relate to local priorities, national plans and ultimately the Millennium Development Goals (MDGs). In Bangladesh PHASE is implemented within a school health and nutrition programme and success is reported against school attendance, health and sanitation provision, changes in health/hygiene practices, improved health due to behaviour change and reduction in diarrhoea rates (Save the Children, 2009). Similarly AMREF in Kenya cites pupils having improved their hygiene practices, reducing disease and absence from school, and improving academic performance (AMREF, 2010).

Local relevance is perceived as important. Hence, the prevalence of intestinal parasites may be considered a key indicator in one location while that of pinworm may be deemed more relevant in another (as in the case of Tajikistan). Therefore, although impressive data sets exist across PHASE countries, it is difficult to maintain a core set of standard indicators. This said, the combination of quantitative and qualitative data available on PHASE activities globally depicts a project which has a perceptible and cost-effective benefit across a multitude of varied settings, which has resulted in significant leverage. For example, AMREF secured a grant from the European Commission for €9 m (US$11.7 m) to replicate PHASE, among other activities, in Kenya, Tanzania and Uganda (GSK, 2007).

PHASE crosses borders and communities when donors and partners are convinced of its efficiency and effectiveness. New projects maximize the commonalities in educational and institutional arrangements, local capacity building and the sharing of know-how in the provision of school sanitation and hygiene facilities. Dealing with differences has been about understanding and responding to the attitudes, motivation and preferences of local children and their teachers.

Inter-country dialogue on the PHASE approach thus focuses on practical issues including material development, stakeholder consultation

and scale-up potential rather than a systematic investigation of the theoretical basis or implications of the approach being brought to that new environment and culture. However, collectively PHASE practitioners have identified key criteria for success:

- confirmation of demand;
- a pre-existing relationship with a network of schools;
- a commitment to ensuring community participation;
- the existence of a PHASE team within implementing organizations; and
- a commitment to institutionalizing the PHASE approach.

PHASE in the UK: Building on success in the South

PHASE in the UK requires structural and creative form. Structural form is about application of the PHASE process, using the above success criteria as a framework. Creative form is about the development and shape of the handwashing campaign, integrating specific PHASE materials.

Structural form

Diarrhoea and other avoidable illnesses occur on a notable scale in 'high-risk' settings such as schools

Confirmation of demand in the UK. A literature review (Fisher, 2008) into avoidable illness among school-age children in the developed world and the place for handwashing with soap, found that, although children do not suffer high mortality rates or other direct consequences such as malnutrition, diminished growth and impaired cognitive development, statistical evidence suggests that diarrhoea and other avoidable illnesses occur on a notable scale, especially in 'high-risk' settings such as schools.

> The average child misses one week of school a year due to communicable illnesses, which in the UK equates to an annual 36 million days lost to absenteeism due to avoidable illnesses, including diarrhoea (CDC, 1996, cited Fisher, 2008). The winter vomiting bug (norovirus) is the most common cause of gastrointestinal disease in the UK with 600,000 to 1 million people affected each year (Health Protection Agency, 2010, www.hpa.org.uk). It is estimated that adults suffer 2–5 colds per year, and that schoolchildren may suffer 7–10 colds per year. In the US 52.2 million cases of the common cold affect Americans under the age of 17 each year resulting in the loss of some 22 million school days (CDC, 1996, cited Fisher 2008).

Recent influenza fears have raised the issue of hand hygiene in schools

Recent influenza fears have raised the issue of hand hygiene in educational settings and schools. Teachers involved in PHASE UK

refer to their own absenteeism rates due to handwashing-related illnesses.

Importantly the review highlighted that:

- A lack of knowledge and understanding about the potential hazards of diarrhoea is evident by parents/carers in developed countries and is linked to general education levels.
- Children from low socio-economic groups are less likely to know about the causes and preventions of disease transmission.
- There is firm evidence of demand for basic hygiene and handwashing initiatives with school-aged children in developed countries. These include both improved education programmes and sanitary facilities.
- There are examples of where children can influence the behaviour of adults, related mainly to consumer and purchasing activity and to lifestyle choices and behaviour. The role of schools is recognized as a very important means of disseminating health messages to the family and wider community.
- Current resources and practice on handwashing in schools in developed countries are ad hoc and largely inadequate.

School is a very important means of disseminating health messages to the family and wider community

A pre-existing relationship with a network of schools. Having confirmed demand, the UK project looked to existing networks. The London Borough of Hounslow, with the support of the Director of Education and local head teachers, agreed to involve 12 primary schools in either co-development or pre-testing. This decision was based on GSK's long association with primary schools in the borough. Existing bilateral relationships facilitated access to new schools and the company's track record through staff volunteerism, injections of funds and open dialogue provided them with confidence to become involved in the co-development of PHASE UK.

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A commitment to ensuring community participation. Community participation has always proved vital to community acceptance and the sustainability of PHASE. Where community consultation has been weak experience shows that there have been delays in implementation (GSK, 2007). Community participation in PHASE UK involves teachers and families from a multicultural inner-city setting where a significant number of children are from lower income families. Hounslow has a diverse population encompassing White British and families of South Asian and Black African origin. A quarter of the population are children and young people, a significant number of whom do not have English as their first language and require additional support in the classroom. The programme's co-development schools, including one for children with special educational needs, are representative of the diversity found in the broader UK primary school community.

PHASE UK involves teachers and families from a multicultural inner-city where a significant number of children are from lower income families

The target group is four to five year olds already attending primary school and who may, or may not have been taught handwashing in nursery or at home. The group was chosen after weighing up the advantages and disadvantages of working with different UK primary school-age children. The project will also reach so-called influencers – other important people in these children's lives – including school catering staff, parents, carers, siblings and older primary school children. Of these, teachers identify older primary schoolchildren as essential to the process.

The existence of a PHASE team in implementing organizations. Teachers are important in all PHASE teams. They act as co-developers and provide access to the voice of children while working with local artists to shape and test materials and visual aids. In school they coordinate colleagues to ensure classroom implementation and facilitate monitoring. Head teachers provide key links to the local community.

This approach is carried to the UK where three schools nominated co-development teachers who are now supported by an Early Years (UK curriculum) education specialist, lead schools inspector (UK Office for Standards in Education, Ofsted) and a sanitation and hygiene development specialist with a professional background in education and teaching. The project is coordinated by the GSK Global Community Partnerships and PHASE Coordinator, again a trained teacher. Where the UK has proved different is in commissioning a creative group, KIDS Industries, which works primarily with organizations that market to families. It is envisaged that the team's success at project level will inform the composition of future national teams or steering groups.

A commitment to institutionalizing the PHASE approach. PHASE is successful when institutional commitment is strong. This factor is no less important in the UK (or US) setting. In developing countries PHASE ownership typically resides with the education ministry, and head teachers are generally open to externally initiated projects so long as they enhance the curriculum. Teachers are keen to use new materials and teaching tools where previously there were none. The benefits of hygiene programmes are apparent: new school latrines (including for staff), access to safe drinking water, reduced diarrhoea cases, cleaner environments and greater numbers of girls attending school. PHASE interlocutors are usually international NGOs that are also stakeholders in wider health and education programmes, many of which have national and international status. These connections provide a platform for information and knowledge sharing, motivation for teachers, as well as technical support. Where PHASE has been most successful it has gained the commitment of the education ministry to work at scale, as in the case of Kenya.

PHASE has been most successful with the commitment of the education ministry to work at scale

UK schools are in a somewhat stronger starting position. Though many feel the effects of budget constraints, they are able to open or shut the door to external initiatives. Demonstrating value-added is about finding a means of providing efficiency and effectiveness and not solely additional resources. Institutionalization and working at scale in the UK, or US is therefore a huge challenge. PHASE must compete for space and attention amid the many other well-resourced education initiatives. A handwashing programme is not a sufficiently attractive hook for most UK schools; the initiative must also fulfil other curriculum or school management needs. This approach may seem a step removed from the act of remembering to wash hands with soap before food and after using the toilet – the main message and aim of PHASE – but without 'hooks' into other more urgent school demands, teaching handwashing in the UK context at least, risks being said and forgotten. From the teacher's perspective, handwashing may be an important hygiene practice but given the many competing demands in school it is hardly worth devoting sustained time and investment on it, unless as a vehicle for teaching it ticks a number of other pressing and measurable boxes.

Without 'hooks' into other more urgent school demands, teaching handwashing risks being said and forgotten

So far two 'hooks' have been identified: PSHE (Personal, Social, Health and Economic), an initiative with traction in UK schools, and absenteeism. PSHE aims to support children and young people to make informed decisions about their lives, contributing to pupils' life chances, developing knowledge, understanding, skills and attitudes (www.pshe-association.org.uk). PSHE also links in with national school-based health initiatives – the Healthy Schools Initiative and Healthy Schools Plus – and so dovetailing handwashing into the PSHE mix should be possible. More complex is the role PHASE can play in reducing absenteeism. Attributing cause and effect is extremely difficult not least because of the complexities of human behaviour and reporting but also the lack of reliable school-population baseline data. It is also hampered by the fact that until children reach mandatory school age (5 years) there is no statutory requirement for UK schools to record absenteeism or the reason for it. Yet attendance from entry onwards is a key determinant of school success for local authorities and head teachers who see the reduction of handwashing-related illnesses (especially flu) as one means of improving it.

Attributing cause and effect is extremely difficult due to the complexities of human behaviour and reporting

The institutionalization challenge is also about safeguarding the role of NGOs in integrating PHASE into relevant health and education activities, and their success in leveraging the resources and expertise of others. Finding like-for-like organizations in the developed country environment is difficult and it is likely that some second way must be found with caveats about remaining loyal to the PHASE ethos and principles.

Creative form

Gaining school buy-in involves creating a behaviour change campaign that will resonate with UK children

Hygiene programming in developing countries centres on young children wanting to be 'big boys and girls'

Gaining school buy-in also involves creating a behaviour change campaign that will resonate with UK children. The statutory education of the target group (4–5 year olds) is structured around the Department for Education's Early Years Foundation Stage (EYFS) Framework (www.nationalstrategies.standards.dcsf.gov.uk/earlyyears). Competition for attention in this space is considerable.

Learning from hygiene programming in developing countries (including, Curtis et al. 2001; Scott, 2005; Biran, 2008) – some of which are adapting social and commercial marketing approaches from the 'North' – the team first conceptualized a big behaviour change idea: ***graduation***. The concept centres on the desire of young children to become 'big boys and girls', moving up the school hierarchy and gaining independence. The team also decided to use the number '5' (five fingers, five years old, counting to five) around which to build learning. Other key components of the programme are shown below; interestingly, many of these aspects are found in PHASE overseas.

Developing these ideas, the face of PHASE in the UK is the Handy Heroes programme. The choice of a 'hero' as a motivational driver required considerable thought. It was concluded that all societies have heroes. Throughout the world and throughout time – from the oral tradition to the podcast – children have always responded well to heroes of some kind. To make the programme relevant and exciting to children in the UK the hero is a derivative of their cultural experience. The reasoning here is simple: the UK has the highest level of children's media proliferation anywhere in the world so it makes sense to present them with a context they can easily access, while in the developing countries – as is the case in some PHASE settings – adults choose a traditional leader or elder to inspire children (and indeed fulfil the very role that the Handy Hero does) (Pope, 2009).

Children learn how to wash their hands correctly by becoming a hero of handwashing after working through five defined stages. The stages are launched and rewarded by school and family assemblies – as they would be in a developing country community-based context. The stages, which also reflect many of the learning methods found in PHASE elsewhere, are as follows:

- launch assembly;
- stage 1: Handy Heroes enrolment;
- stage 2: the Handy Heroes song;
- stage 3: Into Action!
- stage 4: Helping Heroes;
- stage 5: the Art of Handy Heroes;
- reward assembly.

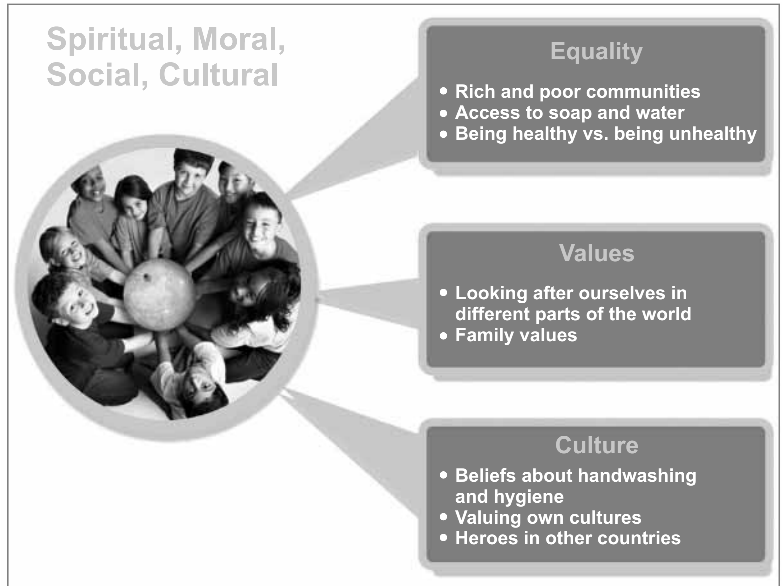

Figure 1. Example of PHASE UK activities supporting spiritual, moral, social and cultural development

On the back of handwashing, children learn about how children live in other cultures

While the Handy Heroes concept captures the imagination of children as a motivator for washing their hands, it does not fulfil the value-added needs of teachers in areas such as 'community cohesion' and 'spiritual, moral, social, and cultural' learning. These curriculum areas from a teacher's viewpoint are notoriously difficult to satisfy. By addressing these through the use of PHASE materials from developing countries (for example, photos of real children in real schools and communities in Africa, Asia and Latin America, 'tippy-tap' experiments or simple latrine models), UK teachers have the means to bring these somewhat intangible subjects alive. On the back of handwashing, children learn about how children live in other cultures while drawing comparisons with and similarities to their own world (e.g. how they obtain drinking water or go to the toilet, how families work, what going to school involves). The inclusion of these materials also provides a link to the family origins of many UK children.

Successful hygiene initiatives for the world's poorest may have lessons to benefit vulnerable communities in richer countries

Discussion of South-to-North knowledge transfer

As highlighted in the introduction, PHASE UK has exposed a dearth of experience in bringing knowledge from the international development sector North. The experience of PHASE suggests the need for further research in this area; of the many successful education,

Box 1. Knowledge migration

The MDGs necessitate that attention is focused on those with greatest need. Understandably then knowledge migrates between the so-called 'South (developing country) to South' route via inter-project learning, approach modifications to new settings and information sharing networks; or 'North (developed country) to South', through technical support and the transfer and interpretation of new techniques (in hygiene programming notably social and commercial marketing approaches and behavioural science). It also moves 'North to North' by means of inter-agency collaboration around common goals, communities of practice and funding. Little *expressed* demand exists to enable the movement of knowledge from *South to North*.

One notable initiative – though with little quantitative and ethnographic studies on its impact (Babul, 2007) – is that of Child-to-Child (CtC); both an approach and an international network promoting children's participation in health and development, spanning some 70 countries. CtC recognizes the power children have to change their lives and helps them improve the health and development of themselves, their families and communities. Recognition of the flexibility and appropriateness of the CtC approach has led to discreet adaptation and implementation of CtC in the UK. Currently one such project is involving more than 40 schools in classroom teaching and peer school counsellor schemes with appropriate links to PSHE and the citizenship strands of the UK curriculum. 'Just like You' is based around school linking (twinning) and assists in the comparing and contrasting of health issues of other countries with those of the UK to develop a more global understanding of health while highlighting the similarities and differences between UK and developing country schools (Gibbs et al., 2002; Child-to-Child and developmentDirect, 2009)

The Child-to-Child approach can also involve school twinning

hygiene and public health initiatives assisting to change the lives of the world's poorest, are there approaches and lessons, and importantly commonalities, that would benefit vulnerable communities in richer countries? Such an enquiry would also investigate further how knowledge migrates at present.

Emerging learning from PHASE

PHASE UK is new and it is still being developed and tested. Even so some aspects are providing learning about South-to-North work.

Learning one: there are more commonalities than differences

Moving approaches such as PHASE North is not about the direct transfer of explicit knowledge in the form of manuals. Nor is it about changes to faces and names. Rather it is about identifying and capturing the essence of PHASE – the role of children and teachers – and reflecting their expressed needs and preferences in materials and approaches that make sense in the context of their everyday lives, wherever they live.

South to North learning reveals culturally diversity, education systems, resources, teachers and teaching methods

Pursuing this South-to-North route inevitably exposes differences: culturally diverse nations, education systems, resources, teachers and teaching methods, access to expertise, professional expectations and service delivery regulation. These are, however, outweighed by commonalities: children as captivated audiences eager to learn, parents with comparable aspirations for their children and teachers looking for approaches and materials that work in their schools. And while UK children are not at risk of dying from repeated bouts of diarrhoea, there is a shared public health and education agenda, especially around attainment and lowering absenteeism.

At classroom level the fabric of the building may look very different but there are a number of education commonalities that reflect the PHASE ethos and its space to deliver results (see Table 1).

Table 1. Commonalities in the education environment

PHASE delivered in developing/middle income country primary education settings	The UK Early Years Foundation Stage (EYFS)
PHASE is totally flexible yet maintains a coherent approach to learning about hygiene	The EYFS aims to build a coherent and flexible approach to care and learning
Child-centred and participatory learning underpins PHASE development and teaching	The EYFS places an emphasis on learning activities that are relevant for and involve each child
PHASE is visual, fun and engaging, allowing children to make their own contribution to sessions and materials	The EYFS advocates fun and motivational learning, developing spontaneous play
Peer-to-peer learning (child-to-child) is an essential element of PHASE implementation	EYFS promotes working as part of a group or class, taking turns and sharing fairly
The relationship between teacher and pupil is one of mutual respect and shared learning	Agreed values and codes of behaviour for groups of people, including adults and children, to work together harmoniously are engendered
While PHASE talks to the local culture and values of children and communities it also emphasizes the need for different views, cultures and beliefs	Likewise, EYFS goals encourage development of the understanding and respect that people have different views, cultures and beliefs
PHASE promotes equity and inclusion: access for girls to sanitation, hygiene facilities and so education	EYFS develops an understanding of cohesive community, at school and beyond. Helping children understand that everyone wants to fulfil their potential and feel that they belong and can contribute
Additionally,	
Ensuring provision of in-school handwashing facilities and routines (two critical times: before food and after the toilet) is central to PHASE's success	The existence of facilities, routines and norms is an integral part of life in UK schools: lunchtime hand-washing, supervised toilet use in reception classes
Reward – through winning competitions, artwork, reading and presenting ideas – is commonplace in PHASE programmes	Young children in the UK are used to a culture of achievement awards from teachers, most commonly in the form of stickers or symbols
Schools are often visually littered with essential yet competing health messages (slogans and graphics on walls being the most common format)	The marketplace in schools, including the School Council, is already overcrowded in respect of externally driven initiatives, freebies and social marketing messages

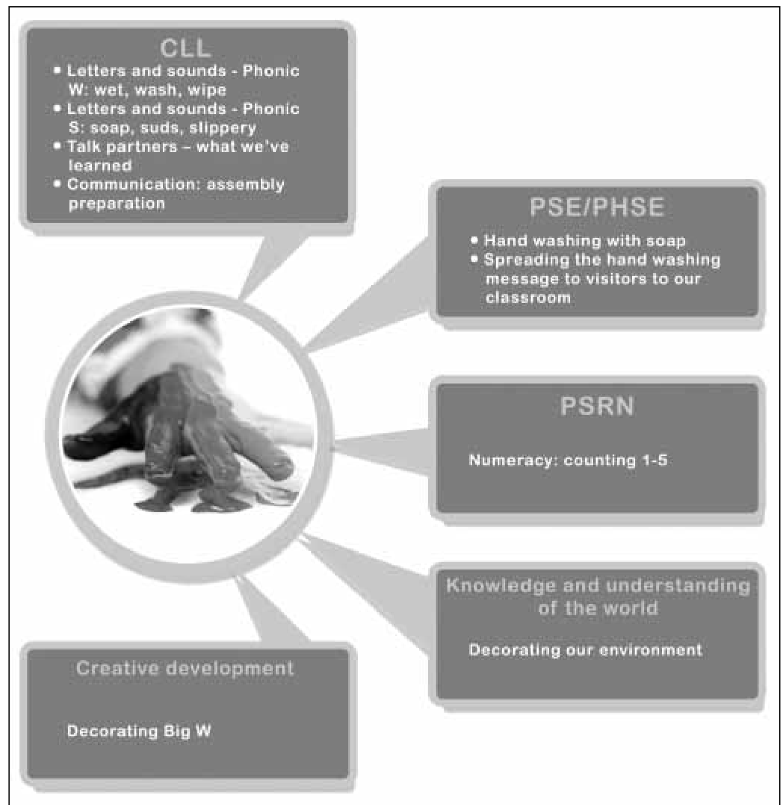

Figure 2. Example of how PHASE activities 'fit' the UK EYFS curriculum

As in developing countries, PHASE in the UK is being integrated into wider activities: five of six nationally prescribed learning and development areas. Globally more work is needed to understand how far PHASE can be exploited.

Learning two: South to North knowledge transfer requires acceptance, as well as relevance

Co-development teachers indentified 'what it would take' for a PHASE UK handwashing programme to be taken seriously

A UK teacher looking at PHASE as an 'import' might be forgiven for expressing scepticism about what appears on first inspection to be a rather localized and unsophisticated set of ideas and resources from Africa and elsewhere. Teachers must be able to readily take ownership of the programme without risking their professional judgement. To this end PHASE co-development teachers were instrumental in indentifying 'what it would take' for a PHASE UK handwashing programme to be taken seriously in UK schools (see Table 2). Their observations are supported in the literature review.

Table 2. Acceptance factors

Flexibility to use materials 'off the shelf' or to 'cannibalize'; open access (reproduction)	Training in how to use the material and manipulate it
Quick, easy-to-follow steps that can be delivered in learning blocks or as a continuous topic; above all 'doable'	School input into determining how to monitor and evaluate appropriateness and impact
Hard copy materials – at least during pre-testing – and acknowledgement in the final design that teachers increasingly rely on the Web to access new materials and ideas	Demonstrated and resourced links across relevant EYFS learning and development areas and cross-curricular areas (CC and SMSC)
Use of Global Handwashing Day as a landmark for implementation of the programme (falling on 15 October, the Day is seen to fit into the start of the school year and the theme of graduation)	Ability to tap in to other interesting initiatives that might attract positive results and attention to the work of the school (e.g. the Healthy Schools Initiative, Healthy Schools Plus, PSHE and the social and emotional aspects of learning framework, SEAL)
Help to meet curriculum, statutory and duty requirements whether it be response to swine flu or Inspectorate (Ofsted) reporting	Developed by children and teachers for children and teachers
Providing a broad range of free resources and activities	Minimizing preparation time
Ability to incorporate the programme into the annual planning cycle for successive groups of children	Minimal but meaningful measurement that can be used by the school and the authority

Acceptance is also an issue for children and parents, many having origins in PHASE countries. Hence, extra care has been given to the portrayal of children from around the world. For example it is not appropriate to always depict African children as having shabby clothing and no shoes. Rather the emphasis should be placed on positive attributes common to children in both settings, while being mindful of the realities of children living in extreme poverty. The materials and teaching messages must also be adaptable to differing language needs.

Learning three: it is not easy to facilitate two-way learning

PHASE UK is derived from 'Southern' knowledge and experiences and this learning will ultimately be 'returned' to that global PHASE community. As PHASE Handy Heroes establishes a foothold in the UK it will become harder to track and capture the combined power of knowledge and experience that strengthens the whole. The programme also risks losing the longer-term experience of transferring knowledge South to North, though this situation is no different from the complex knowledge management issues faced by many a global initiative.

PHASE UK learning will ultimately be 'returned' to the global PHASE community

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