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## **Action research for improvement in schools, communities and organizational spaces**

### **What is to be done?**

Edited by  
George Bagakis  
Sofia Georgiadou  
University of Peloponnese, Greece

**The Collaborative Action Research Network**

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**Manchester Metropolitan University  
Didsbury, M20 2RR UK**

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## **Introductory Notes**

This bulletin is based on papers presented at the 2009 Collaborative Action Research Network (CARN) Conference: **Action Research for Improvement in Schools, Communities and Organizational spaces. What is to be done?** The conference was organized by the University of Peloponnese, Department of Social and Educational Policy, in Collaboration with Athens-Psychico College and took place at the Campus of Athens-Psychico College in Athens, 30 October - 1 November 2009.

The Bulletin consists of papers from contributors from organizations in 11 different countries. The good climate, the enthusiasm and the international atmosphere of the conference based on the values that CARN has served for more than 33 years took place in the context of a new government which had only recently been elected in Greece (less than 2 months previously). This government adopted many slogans, eg. for school improvement, for the country – which are entirely different from what then followed in Greece: Greece has become the “bad example” and the “black sheep” internationally. The memories of this conference belong to the last positive elements before the storm which struck this country: Greeks became the first negative news every day for months in the media, hard economic measures of austerity with serious cuts in Greek salaries, the fear of the country going bankrupt etc. Although in this conference Stephen Kemmis argued about Aristotle's writings on praxis 2500 years ago in Athens it has been very painful for Greeks immediately afterwards (not always without reason) to be signified by the media as an “exemplary black sheep”.

We hope that such good moments as those of the conference will return and will be multiplied in the difficult period that Greece is undergoing. We hope that the roots from its rich cultural heritage will prevent Greece from both economical and cultural bankruptcy in a competitive world where more European countries at the moment risk being infected by a similar virus.

The 8 papers which follow have different directions:

The first is a long collective paper, “ *The international Teacher Leadership project’ a case of international action research*” by David Frost, George Bagakis, Paul Barnett, Lefki Biniari, Ozgur Bolat, Mona Chiriac, Ivana Cosic, Kiki Demertzi, Juddy Durant, Maria Flores, Sofia Georgiadou, Val Hill, Stavroula Kaisari, Pavlos Kosmidis, Iris Marusic, Jo Mylles, Jose Penalva, Ljubica Petrovic, Amanda Roberts, Thanasis Stamatis and Marrianna Tsemperlidou derives from an international action research project which was running in England and 5 more countries of South Europe coordinated by the Faculty of Education of Cambridge University, UK. The paper focuses on a network of teachers and researchers and the conceptual exploration of the idea of teacher leadership and its role in educational reform.

The second paper derives from Sweden, Marianne Westing “*Using Research Circles when Developing Daily Social Care for Elderly*” and belongs to the social care sector.

The third is a long paper from Sri Lanka, “*Capacity Building of Educational Personnel through Action Research and Reflective Practice – Four Stories out of Fifty from Sri Lankan Teachers and In-service Advisors*” and derives from a national action research project coordinated by Dr Godwin Kodituwakku and Dilani Hettige who have written an introduction for the paper. It consists of 4 school stories out of 50 on action research in this country. They derive from 2 English teachers, R. M. M. C. Ratnayake and H. M. Suchina Watagodakumbura, a teacher of Mathematics, E. P. Padma Ekanayake and an In-service Science advisor, Vipla Nellihela. The themes of the 4 stories are related to: Remedial teaching, psychosocial care, peace and values education.

The fourth is a short paper by Satoshi Suzuki, and derives from Japan, “*Evaluation of Organizational Improvement Based on Action Research Utilizing Soft Systems Methodology*”. In this paper it is argued that evaluation of organizational school improvement can only be grasped in an evaluation that deals with “actuality” and not from the outside.

The fifth, a short paper by Ken Uchiyama, also derives from Japan, “*Preliminary discussion of Validity and Legitimacy of SSM-based AR*”. It is complementary to the third paper.

The sixth paper, by *Katharina Soukoup Altrichter, Herbert Altrichter and Johannes Kepler*, “*Teaching Action Research in an Award –Bearing In-service Programme in Austria: A Rretrospective Evaluation*” also refers to the evaluation.

The seventh paper, by *Ioanna Georgiou and, Peter Johnston-Wilder*, “*Action Research for Secondary Mathematics through History and Culture*” derives from the UK. It describes an Action Research project run with a group of 16-17 year old underachieving students.

The eighth paper by *Nantia Tsaula, Fenny Sidiropoulou, Mania Poubrou and Natasa Karakoulidoy*, derives from Greece, “*Portfolio: An instrument for change and development in the nursery school*” and refers to the methodological use of portfolio.

**George Bagakis** Professor of University of Peloponnese, Co-ordinator of the conference and co-editor of the bulletin

**Sofia Georgiadou** Member of the Organizing Committee of the Conference and co-editor of the bulletin

The editors would like to thank **Charmian Wilby** (CARN Secretary) and **Ruth Balogh** (CARN Co-ordinating Group) for their help in bringing this Bulletin to publication.



## **‘The International Teacher Leadership project’ a case of international action research**

### **David Frost**

University of Cambridge Faculty of Education and Wolfson College, Cambridge, UK  
with

**George Bagakis**, The University of Peloponnese, Corinth, Greece

**Paul Barnett**, Barnwell School, Stevenage and Wolfson College, Cambridge, UK

**Lefki Biniari**, experimental Gymnasium of Anavryta, Athens, Greece

**Ozgur Bolat**, Turkish Education Foundation, Istanbul, Turkey and Wolfson College, Cambridge

**Mona Chiriac**, Barclay School, Stevenage Wolfson College, Cambridge, UK

**Ivana Cosic**, Ministry of Education, Zagreb, Croatia and University of Cambridge Faculty of Education, UK

**Kiki Demertzi**, 3<sup>rd</sup> Directorate of Secondary Education of Athens, Greece

**Judy Durrant**, Canterbury Christ Church University, Canterbury, UK

**Maria Flores**, University of Minho, Portugal

**Sofia Georgiadou**, Education Research Centre of Greece, Athens, Greece

**Val Hill**, Birchwood High School, Bishop Stortford, and Wolfson College, Cambridge, UK

**Stavroula Kaissari**, Petroupolis 2nd Gymnasium, Athens, Greece

**Pavlos Kosmidis**, Directorate of Secondary Education of East Attica, Greece

**Iris Marusic**, Centre for Educational Research and Development, University of Zagreb

**Jo Mylles**, Sir John Lawes School, Harpenden and Wolfson College, Cambridge, UK

**Jose Penalva**, Facultad de Educación Universidad Murcia, Spain

**Ljubica Petrovic**, Agency for Mobility and EU Programmes, Zagreb, Croatia

**Amanda Roberts**, University of Hertfordshire, UK

**Thanasis Stamatis**, Ex-Headteacher of Petropolis 2nd Gymnasium, Athens, Greece

**Marianna Tsemperlidou**, 3<sup>rd</sup> Directorate of Secondary Education of Athens, Athens, Greece

### **Abstract**

The paper arises from the International Teacher Leadership project, a research and development project involving researchers and practitioners in 14 European countries. The paper provides a conceptual exploration of the idea of teacher leadership and its role in educational reform, central to which is the idea that teachers, regardless of their level of power and organisational position, can engage in the leadership of enquiry-based development activity aimed at influencing their colleagues and embedding improved practices in their schools. The paper provides an outline of the project’s methodology which builds on that used in the Carpe Vitam Leadership for Learning project (Frost, 2008a). It is a form of collaborative action research which is highly developmental and discursive. It seeks to identify principles, strategies and tools that can be applied in a range of cultural settings. The paper includes a thematic analysis of the cultural contexts and policy environments of the participating countries in order to identify the obstacles to teacher leadership and to inform the nature of the support strategies employed.

### **Note:**

Since 2009 the ITL project developed and expanded. Some participants involved in 2008-9 did not sustain their involvement and new partners joined the project. The project as it was enacted between 2009-11 was accounted for in a report: Frost, D. (2011) *Supporting teacher leadership in 15 countries: the International Teacher Leadership project, Phase 1 - A report*, Cambridge: Leadership for Learning University of Cambridge Faculty of Education – [www.educ.cam.ac.uk/centres/lfl/researchanddevelopment/teachers/itl/](http://www.educ.cam.ac.uk/centres/lfl/researchanddevelopment/teachers/itl/)

The initiative for this research and development project<sup>1</sup> came from David Frost at Cambridge as a response to the interest shown by various researchers and practitioners in countries including Croatia, Greece, Portugal, Romania, Spain and Turkey. Colleagues in Australia, New Zealand and British Columbia have also expressed interest in participating through a networking relationship. David Frost has been developing models, strategies and tools for supporting teachers as leaders of innovation and change in number of contexts in the UK over the past 20 years, most recently in the context of the HertsCam programme. His research and development work has been conceptually located within the ‘Leadership for Learning’ work at the Faculty of Education. The idea of teacher leadership is linked to the LfL team’s commitment to democratic forms of learning and leadership ([www.educ.cam.ac.uk/centres/lfl/](http://www.educ.cam.ac.uk/centres/lfl/)). The project builds on the methodology used in the Carpe Vitam Leadership for Learning project (Frost, 2008a).

### **Aims of the project**

The over-arching aim the ITL project is to build forms of support for teacher leadership appropriate to a range of different cultural and political settings and responsive to the particular challenges that arise in those settings. We set out to establish support programmes in countries such as those listed above and then to explore how the development of teachers’ professional identity and their modes of professionalism can contribute to educational reform in a variety of cultural contexts.

In the long term we seek to:

- create a sustainable network of academics, policy activists and practitioners across Europe dedicated to the sharing of knowledge about how to develop teachers’ professionalism
- create a sustainable network for teachers that would provide them with a forum for building their own professional knowledge – knowledge about effective teaching and learning and knowledge about how to transform and improve educational provision in their own schools and systems

It is hoped that in addition to fulfilling its central aims, this project will also provide opportunities for teachers to create networking opportunities for their students.

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<sup>1</sup> **Acknowledgments**

The initial stages of this project have been funded from a variety of sources including the Open Society Institute, The University of Peloponnese, Leadership for Learning (Cambridge), Canterbury Christ Church University, and the participating HertsCam schools (Birchwood, Barnwell and Sir John Lawes). Some individual team members have also contributed from their personal resources.

## **The project team**

The project is directed by David Frost and co-ordinated from Cambridge. The methodology of the project is both developmental and discursive. The project is conceived as a collaboration with research partners and practitioners. An action research methodology enables us to gather data that can be used to evaluate programmes and fed into an international discursive process. Members of the project team and the teachers and principals in the participating schools will be drawn into a process of discussion and collective evaluation in order to build our knowledge of how to support teacher leadership and to make this knowledge available to the wider professional communities in Europe.

The founders of the project occupy a variety of professional roles and in many cases have multiple identities. The project coordinator, David Frost, is an academic researcher who also leads a programme to support school improvement and teacher development in partnership with a large local authority district in the UK (The HertsCam Network).

The team also includes:

- full time teachers / senior leaders in schools who have experience of research and strong associations with the University of Cambridge
- civil servants employed by quasi-governmental agencies
- staff in NGOs
- full time academic researchers in universities and research institutes
- government employed advisers
- post-graduate research students

This multiplicity of professional identities ensures an appropriate range of expertise and perspectives on key areas such as educational policy, teacher development, school improvement and educational reform. What unites members of this team is their shared commitment to providing support for teacher leadership.

The project team met for the first time in Cambridge in November 2008 to agree on the basic principles and the project methodology. The team met for the second time in Corinth, Greece in May 2009 to work on the detail of the support programmes envisaged. Communication is maintained through a series of monthly bulletins posted on a project web forum. Ideas and resources are shared. As the practice of supporting teacher leadership develops it will be subject to critical discourse through structures discussion within this team. Funding is being

sought to be able to stage a series of international conferences for researchers and practitioners.

At the beginning of the academic year, 2009-10, teacher leadership support programmes are beginning in Athens, Greece, Zagreb, Croatia, Minho, Portugal, Murcia, Spain, Istanbul, Turkey, Hertfordshire, UK (HertsCam) and South East England, UK (Cantarnet). At the time of writing we welcome new partners from Bosnia and Herzegovina, Bulgaria, Kosova (as defined by UNSCR 1244), Romania, Serbia, Montenegro, the Former Yugoslav Republic of Macedonia and Moldova. In addition there is a linked programme in which support for teacher leadership plays a key role in addressing the challenge of participation in education of ethnic minority families. This project involves many of the SEE countries listed above and is funded in part by OSI (Open Society Institute) and we are hopeful that it will be funded also by the European Commission.

The project centres on practical work to create programmes of support for teachers who wish to redefine their roles and become ‘champions of innovation’ (Frost, 2008b). Data will inform the development of strategies adapted to each national and institutional context. Principles and dilemmas are processed through critical discussion both within the project team and more widely through international conferences and networking for the participating practitioners.

### **Developing research agenda**

Since presenting a paper about the research agenda for teacher leadership at an ICSEI<sup>2</sup> conference (2003) David Frost and a number of colleagues have worked to develop their understanding of teacher leadership largely through action research. This has centred on the development of the HertsCam Network, created through a partnership between the local education authority for Hertfordshire and the University of Cambridge Faculty of Education. The approach used there is referred to as ‘teacher-led development work’. The Cambridge team has also maintained a dialogue with colleagues in Kent, especially Judy Durrant who works in similar ways (Durrant, 2004; Durrant and Holden, 2006; Frost and Durrant, 2002, 2003a, 2003b).

Internationally, teacher leadership idea has been explored as a dimension of the Carpe Vitam Leadership for Learning project (MacBeath *et al.*, 2006). This project enabled the team to explore teacher leadership in a variety of settings around the world. Workshops focusing on

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<sup>2</sup> ICSEI – International Congress on School Effectiveness and Improvement

‘leadership density’ (Sergiovanni, 1992) and the role of the teacher involved practitioners from Greece, Norway, Denmark, Austria, USA and Australia as well as the UK in reflection on teacher leadership. There has also been ongoing dialogue with like-minded colleagues in Sydney and discussions arising from the presentation of papers at conferences such as the annual meetings of ICSEI.

Over 15 years of work in these areas has generated substantial evidence that allows us to conclude that teacher-led development work can impact significantly on professional and institutional learning (e.g. Durrant and Holden, 2006; Durrant, 2004; Frost, 2004). The evidence is also abundant in the pages of the Teacher Leadership journal ([www.educ.cam.ac.uk/centres/lfl/current/research/teacherleadership.html](http://www.educ.cam.ac.uk/centres/lfl/current/research/teacherleadership.html)) where teachers’ voices are articulated and broadcast. In addition we can say that we have successfully developed a set of strategies to support teacher leadership including the networking arrangements exemplified in the HertsCam Network.

### **A warmer policy climate?**

The traditional hierarchical structures of schools and top-down policy initiatives have arguably inhibited the development of teachers’ modes of professionalism. However, there have been significant shifts in the policy environment over the past 2 or 3 years that are indicative of a climate more conducive to teacher leadership. Schools in the United Kingdom (UK) are increasingly expected to play a more proactive role in their own improvement, a fact underlined by several recent policy initiatives. For example the UK government has made radical changes to the inspection system and as well as to schools’ relationship with central and local government. As a result, Office for Standards in Education (OFSTED) teams no longer inspect and deliver a judgment on a school, but work with the school to validate the judgments the school has already made about its performance through rigorous self-evaluation carried out in partnership with their ‘school improvement partner’. Levels of prescription in the curriculum have also been significantly reduced in recent years. Schools are now much freer to experiment with curriculum content and design than at any time since before the introduction of the National Curriculum in 1988. For example, the Qualifications and Curriculum Authority (QCA) invites schools, via its website, to contribute to a debate about teaching and learning by submitting case studies of innovative practices they have developed (QCA, 2007). In addition, reforms to the vocational curriculum at Key Stage 4 (DfES, 2007) have given schools an unprecedented opportunity to collaborate locally in the design of curriculum and partnership arrangements.

In other parts of the world there are similar signs of doubts about the benefits of the high-stakes testing approach and centrally mandated curriculum reform. According to Andy Hargreaves, there is a momentum for change in the US that could lead to what he calls ‘the age of post-standardization’ (Hargreaves, 2008). In a brief article for Education Week he argues that some of the same policy makers who pushed for the creation of a high stakes testing regime are now calling for ‘a major overhaul of the American testing industry’ (Hargreaves and Shirley, 2007). The report of the New Commission on the Skills of the American Workforce (NCEE, 2007) takes stock of the declining position of the USA in international league tables and calls for an emphasis on creativity and innovation. Hargreaves also points to successful policies in Finland and Ontario which have embraced ‘post-standardisation’. This theory of change pays attention to developing teachers’ capacities instead of the measurement of performance.

So we could say that the policy environment in some countries is warming up and becoming more fertile for teacher leadership. However, in these situations there is an urgent need to clarify how teacher leadership can be cultivated, how it works and the part it can play in reforming educational practice and improving school effectiveness. There is also a need to explore how teacher leadership can be cultivated within schools in a variety of cultural, social, political and organisational settings. In some countries the need for reform on a national scale is pressing and previous attempts have often faltered (see for example Opfer, Bolat and Frost, 2008). In these situations it may be possible to demonstrate the potential of teacher leadership to contribute to reform.

### **Rationale for teacher leadership**

The focus on teacher leadership arises from scholarship and experience over many years informed by a series of small-scale research projects (see Frost *et al.*, 2000; Frost, 2001; Frost and Durrant, 2002; Frost and Durrant, 2003a; Frost and Durrant, 2003b; Frost, 2005; Frost, 2008c). More recently, the success of the HertsCam Network in the UK and insights gathered from working with other teacher networks such as those sponsored by the National College for School Leadership, the General Teaching Council for England and the National Union for Teachers has led to the conviction that teacher leadership holds the key to educational reform. This conviction is underpinned by a careful analysis of the literature on school improvement leading to a conceptual framework which explains the linkages between the concept of teacher leadership and the development of the kind of professional learning communities that leads to school effectiveness.

The view of school improvement assumed here is that it is not a matter of organizational restructuring which might leave the quality of practice untouched (Fullan, 1993); nor does it involve a focus on the proxy measures of student attainment which not only neglects the critical role that pedagogy plays but also distorts and inhibits the professional learning that teachers and schools need to engage in. Instead the conceptual framework employed here focuses on ‘capacity building’ as the key defining characteristic of the improving school (MacBeath *et al.*, 2007; Mitchell and Sackney, 2000; Gray *et al.*, 1999). Capacity building is about developing a professional culture in which self-evaluation, innovation and improvement are valued and operationalised such that the school has the capacity to change and improve itself (Lambert, 1998). Capacity building entails the mobilisation and enhancement of both intellectual and social capital (Hargreaves, 2003) to create a powerful engine for transformation.

Leadership is key to capacity building, and this has been underscored time and again by policy makers and researchers (eg Sammons, Hill and Mortimore, 1995). However, narrow conceptions of school leadership still persist and stand in the way of the development of the capacity for educational reform.

There is a reasonable level of agreement in the literature that leadership is essentially about influence (Yukl, 1994; Leithwood *et al.*, 2004), but there is considerable room for argument about the direction of that influence. For example, is the direction towards specific predetermined goals or more broadly towards a vision of a possible future? Alternatively, the direction of influence could be less specific but driven by a set of values that act as a guiding light. The question of the specificity of the direction of influence is directly related to assumptions about who exercises leadership. If leadership is associated with the idea of a single executive figure whose authority is drawn from their position in the organization, it may also be assumed that effectiveness is maximized when there are clear and specific goals and where leaders either have the necessary personal traits and attributes (Bass, 1981) or they have been adequately trained for the role. However, there is widespread support for the view that this narrow conception of leadership does not best serve school improvement because it fails to build capacity for improvement and reform (Hopkins, 2001; Silins & Mulford, 2003; Gronn, 2002; Raelin, 2005; Spillane, 2006; Storey, 2004; McLaughlin & Talbert, 2001).

This project assumes an alternative conception of school leadership that rests on the idea of distributed leadership (Gronn, 2000, 2002; Spillane, Halverson & Diamond, 2004; Spillane,

2006). This perspective recognises that leadership involves collaborative and interactive behaviour through which organisations are maintained, problems are solved and practice is developed. This corresponds with concepts such as ‘high leadership density’ (Sergiovanni, 1992) which refers to the extent to which members of a learning community take responsibility for quality and effectiveness. The idea of teacher leadership has been promoted in many forms over in the USA and the UK and is increasingly seen as crucial to educational reform. In the 1980s, major reports such as *A Nation At Risk* (National Commission on Excellence in Education, 1983) and ‘*A Nation Prepared: Teachers for the twenty first century*’ (Carnegie Corporation, 1986) called for a reinvigoration of the teaching profession in the USA. Teacher leadership was seen to be the key lever for this reinvigoration.

The idea of teacher leadership was part of the developing discourse of professionalisation in the USA in the 1980s and 90s: Judith Warren Little had written a piece entitled ‘Assessing the prospects for teacher leadership’ (1988) and Anne Lieberman had addressed the question ‘Teacher Leadership: What are we learning?’ in 1992. However, significant breakthrough occurred a little later with the publication of the first edition of ‘*Awakening the Sleeping Giant: Helping Teachers Develop as Leaders*’ (Katzenmeyer and Moller, 1996).

Subsequently, the ‘Teachers as Leaders Research project’ in Australia (Crowther *et al.*, 2002) illustrated what could be done to foster teacher leadership. In the UK, the National College for School Leadership sponsored useful work on distributed leadership (Bennett *et al.*, 2003; MacBeath *et al.*, 2004). Linked to this we have seen in the UK the provision of training courses and other forms of support focussing on ‘middle leadership’ and ‘emergent leaders’. These have tended to focus on building the capacity of heads of departments and other team leaders to manage their teams more productively (Naylor, Gkolia & Brundrett, 2006). There are considerable difficulties with this approach however. The creation of special roles of responsibility requires additional funding to enhance salaries and this is not easily found and in any case, it places a limit of the development of leadership capacity, reaffirming the view that the sort of professionalism that includes the exercise of leadership is only for the few rather than the many.

The focus of the ITL project differs significantly from the work described above in that it does not assume that that leadership is automatically linked with positions in the organisational hierarchy of the school but instead recognises the potential of all teachers to increase their leadership capacity as part of their role as a teacher. This view resonates with the work on ‘professional learning communities’ one of the defining characteristics of which

is ‘reflective professional enquiry’ (Bolam *et al.*, 2005) which involves the ‘deprivatisation of practice’ (Louis *et al.*, 1995) through which tacit knowledge is converted into shared knowledge. Thus the ‘intellectual capital’ held by the staff is mobilised which is arguably a necessary condition for school effectiveness (Hargreaves, 2001). However, while the idea of enquiry is important, this account of professionalism is not adequate to secure educational reform. What it lacks is an account of leadership – the process whereby a teacher can clarify their values, develop a personal vision of improved practice and then act strategically to set in motion a process where colleagues are drawn into activities such as self-evaluation and innovation. This is truly about the enhancing of human agency and the development of a culture of shared responsibility for reform and the outcomes for all students.

### **The cultural / national contexts for the project**

Cultural contexts are different and we cannot assume that the same strategies and tools will be equally successful in every setting. The UK team have 20 years of experience in this field and have created a wealth of materials and approaches, but these can only constitute a starting point. In the early stages of the project we engaged in a cultural analysis exercise to inform the adaptation and development of materials to suit the particular circumstances of each national site. The resources that have already been shared include high quality workshop guidelines, tools to structure teachers’ reflection and planning, facsimiles of a wide range of documents that help teachers to imagine how they will lead development initiatives in their schools. These materials are being translated into the languages of the participating countries and then trialled and evaluated in those different contexts in order to discover what works. Materials will be adapted and shared throughout the network and new materials will be designed in response to what we learn about supporting teacher leadership in each cultural setting.

Educational reform is not simply an act of improving practice. It is, instead, social reform (Carr and Kemmis, 1986) and as such is affected by the social context in which it is embedded. To understand educational reform we must therefore understand a country’s wider educational context (Reezigt and Creemers, 2005). This section of this paper uses the imagined experience of a child, Loa, and a teacher, Sim, to explore the educational world of the ITL project countries. It considers the learners’ experience of education, how teachers are trained before they enter the profession and how they are developed whilst fulfilling the teacher role. It moves on to examine the impetus for educational reform and to explore the part which teachers play in supporting the development of learning within their schools and more widely. It

concludes with an analysis of the potential for teacher leadership to scaffold further the development of teacher agency and school improvement.

### **What is it like to be a learner in the ITL project countries?**

If Loa, our imagined child, were born in the UK she would begin her compulsory education at the age of 4 and be able to leave school at the age of 16. As a Turkish child, she would have to attend school between the ages of 7 and 14, whereas if she were Portuguese or Croatian she would need to be in class from the age of 6 to 15. In Greece she would start school at 6 but could leave one year earlier, at 15, whereas in Romania she could leave at 16. In Spain, her compulsory schooling would take place between the ages of 6 and 16.

The current success of the educational systems in countries in the ITL project is similarly variable in terms of assuring an adequate level of education for all children. If Loa was to be educated in Turkey and was able to read and write at age 15, she would be one of 87.4% of students to achieve this educational standard. In Portugal, the percentage rises to 93.8%, in Greece to 96%, in Romania to 97.3%, in Croatia to 98.1% and to 99% in Spain and the UK (United Nations Development Programme, 2007).

### **How do you become a teacher in the ITL project countries?**

If we turn our attention to the teachers who guide the learning of Loa and her peers, we find that they gain entrance to their chosen profession in varying ways across ITL project countries. In Portugal, Sim, our imagined teacher, could train for four years at a variety of institutions, including universities and, in Greece, only in universities. In Croatia, Romania, Spain and Turkey, Sim's initial training would also take place within a university setting. However, despite this seemingly auspicious start, there are significant issues regarding teachers' pedagogic knowledge in many of the ITL project countries. In Greece and Turkey, for example, teachers enter the classroom with little practical understanding of how to engage students or effectively scaffold their learning (Tolkut, 1994; Bulut *et al.*, 1995). In the UK, in contrast, Sim's training would be fairly rigorous in terms of its pedagogic base, both theoretically and practically. This training could be undertaken through a number of different routes: a degree in education, a subject-based degree followed by a one year post graduate certificate in education or a choice of employment based routes where he would learn 'on the job' supported by a university and school-based mentor.

Teacher recruitment in the ITL project countries is often centralised and government controlled. If Sim wanted to become a teacher in Portugal, for example, he would be recruited through a bureaucratic system controlled by the Ministry of Education and subjected to an examination of his knowledge and competencies. In Turkey, his appointment would similarly be made by the central government. His experience in Spain would be similar if he wanted to teach in a public school although in a private school he would be selected by the Principal, a position similar to Croatia and the UK although here the Headteacher is supported in the selection process by the governors of the school. If Sim wanted to teach in Romania or Greece he would need to pass a national examination in both his subject area and in pedagogy. If he lived in Romania, all teachers' results would then be ranked and Sim and his fellow new teachers could choose, in order of the results they achieved in the examination, the school in which they wished to work. In Greece, he would be employed by the Ministry of Education but there is some choice about the school to which he is assigned.

### **The continuing professional development (CPD) of teachers**

The construction of teacher development as 'training' is a common tendency across ITL project countries. Teachers often take part in activities where they are 'instructed in' the mechanics of a new curriculum, such as in Turkey and Greece, without any attention paid to how to engage professionals with the underpinning values or principles of what they are now being 'trained' to 'deliver' (Grossman *et al.*, 2007; Koc *et al.*, 2007). This technical approach to professional development does not acknowledge the need to build teachers' capacity to lead and manage innovation, to have an active voice in change and to experiment with and reflect on their practice at school level (Güven, 2008). This delivery model of teacher development is, unsurprisingly, both unpopular with teachers and ineffective in changing practice (Sari, 2006). In Croatia, for example, dissatisfaction with outmoded forms of CPD is reflected in low numbers of teachers attending development events (OECD, 2009).

The focus of the professional development activity is similarly problematic. In many of the ITL project countries, teachers' CPD revolves around extending teachers' current knowledge and skills in their specific subject areas or re-training in other subjects. A traditional lack of pedagogic discourse in countries such as Greece, Romania and Spain, together with a top down change-management policy, contributes to the lack of impact of professional development initiatives.

Collaborative working is seen as the way forward in some countries. As a teacher in the UK, Sim would attend a programme of five, internally-run staff development days, provided by all schools for their teachers each year. These days increasingly focus on finding ways of sharing what the school collectively 'knows' and sessions are often led by teachers who are given a platform to share new practices they have developed to support the development of learning and teaching. In other countries, for example, Spain, instances of collaborative working are low (OECD, 2009).

Collaboration can have a political agenda. In Portugal for example, The Technological Plan for Education includes a government commitment to improve teachers' practice through allowing schools to work within networks and encouraging collaborative working at teacher level. However the current system of teacher evaluation, based on classroom observation and student achievement, perhaps runs counter to this collaborative intent. A similar paradox arises in the UK, with the government's promotion of inter-school collaboration and networking to support professional development apparently at odds with its emphasis on schools becoming 'specialist' and competing for position in national league tables. In other countries, such as Romania, opportunities for teachers to learn from one another remain scarce.

### **The impetus for change**

A view of education as requiring structural change predominates in many of the countries involved in the ITL project, both from those within and outside of the profession. In Turkey for example, 70% of the population identified education as 'a very big problem' (Pew, 2002, cited in Grossman and Sanders, 2008). In Greece, diminishing belief in the existence of a clear vision for the future development of the educational system underpins a general acknowledgement of a need for considered reform.

A need to conform to EU entry requirements is often a strong impetus for change, with the Copenhagen Treaty's requirement that EU countries 'establish education systems to achieve the strategic ends of the union' galvanising governments into action (Aksit, 2007). Turkey, as a country seeking admission to the EU, has been challenged to respond by this dictate. A desire to improve a country's standing in international comparisons of educational success is another acknowledged driving force. In Croatia, for example, low PISA results provide an impetus for the replacement of the current outdated curriculum with a competence curriculum based on clearly-defined learning outcomes ([www.oecd.org](http://www.oecd.org)).

The need to respond to Government policy, expressed in the form of targets, is another driving force for change. In Portugal, for example, the aim of the 'New Opportunities' initiative is to ensure that by 2010, 650,000 adults take advantage of vocational courses to raise their level of educational competence to that required of students at the end of their basic schooling. In the UK, the government similarly wishes to use its policy of setting targets for student achievement and the concomitant publication of these achievements in the form of school league tables as a driving force for change.

Despite the prevalence of this acknowledged need for reform then, would-be reformists in many ITL countries face both structural and political impediments to change. In terms of structure, a high degree of centralisation in the education system is a dominant feature in many ITL countries, restricting the impetus for and realisation of change initiatives. Attempts at decentralization are often met with strong opposition. In Turkey, for example, politicians opposed an attempt to decentralise the education system on the grounds that the Republic's future was closely connected to the centralist structure of the state (Buyukduvenci, 1994). In Spain, the opposite problem occurs. Separatist national policy and practice have increasingly become the norm but this means that it is difficult to reach a core educational policy and gain equity of opportunity for students in terms of their educational experience.

The political nature of the education systems in ITL project countries similarly militates against reform. The recruitment of Headteachers, for example, can become a highly political act. In Turkey, for example, Headteachers are selected through a combination of test and interview, with the attendant danger of subjectivity and political motivation of choices made (Goke, 2009).

Despite these structural and political obstacles, some change initiatives have been introduced. A focus on developing competency-based education is apparent in a number of ITL project countries. In Portugal, for example, a re-structuring of the curriculum has focused on the theme of the essential competencies to be achieved by the end of a child's period of compulsory education. In Turkey, a new constructivist curriculum has been introduced. Other major reform initiatives focus on school organisation. In Portugal, for example, the 'Full Time school' programme has extended the timetable in its first phase of primary schools from morning or afternoon only education for students to all-day sessions.

The reform agenda faces many challenges however. Reforms are often piecemeal and do not impact on core educational practices (Aksit, 2007). Moreover, curriculum change is often imposed from above and introduced with inadequate initial staff training (Korkmaz, 2008) and with little attempt to provide teachers with the opportunity to try something out, reflect on their practice and come together to share their experiences (Güven, 2008). Spain, for example, ranks the lowest of all OECD countries in terms of the level of collaborative practices for professional development (OECD, 2009).

### **Teachers' roles in reform**

There is a shared understanding amongst the educational professionals involved in the ITL project that the basis for educational reform is flawed whatever the national context. Reform initiatives which adopt a big bang and top down approach, which depend on a delivery model of professional development and which do not address the challenges of a centralized structure have a weak base. Add to this a failure to acknowledge the key role played by teachers in successful change and these ill-conceived reforms are bound to fail.

The developing understanding in the United Kingdom of the key role which teachers can play in educational reform (Frost and Durrant, 2003a; Durrant and Holden, 2006) is also shared by ITL project members. Teachers, as the final brokers of reform initiatives, are key to real reform which impacts positively on student learning (McLaughlin and Talbert, 2001). For many of our international partners this relationship is yet to be formally acknowledged, however. Turkey is unusual in that Atatürk, the first president of Turkey and a military commander, recognised the significance of teachers' roles in shaping the new Turkish state early in the 20<sup>th</sup> century. Having convened the Education Congress in 1921, attended by over 250 teachers, he left the battle front to inaugurate the meeting, describing teachers as the 'distinguished pioneers of the Turkish state' (Uygun, 2008: 11). However, unfortunately this early promise has not yet been realised.

Teachers' dominant identity as the deliverers of the dictates of others presents a fundamental obstacle to the development of teachers' agency (Frost, 2006). The status, and consequent salary, of teachers in many ITL countries is low. Working conditions are often poor and teachers feel that they lack support. This can lead to a sense of low morale and self-esteem, which potentially undermines teachers' sense of their own professionalism. Teachers in Spain and Portugal, for example, appear to struggle to attain the level of self-efficacy and job satisfaction reported by colleagues in other OECD countries (OECD, 2009).

Attempts to change this situation can bring their own problems, however. In Portugal, for example, teachers' careers were regulated by 1990 legislation which was premised on the notion of a 'single career', with all teachers proceeding along an identical path to reach the highest point of their career. The principles of differentiation in career path, with attendant teacher evaluation, although apparently more progressive in nature, brought with it accusations of hierarchy and favouritism and led to teacher strikes (Flores and Ferreira, 2009).

So what hope is there for the development of teacher leadership in the countries participating in the ITL project? In short, a great deal. Many teachers in the ITL project countries are crying out for change. They know that there is a better way and are open to developing their own understanding of what that better way might be. They also know that they wish to play an active role in the development of their own practice and of the educational system in their country.

### **Promoting teacher leadership**

In order to promote teacher leadership, we need strategies to support its development. There are at least four dimensions to this:

- appropriate methodologies for teacher leadership
- partnerships with external agencies
- deliberate cultivation within the schools
- appropriate contexts for knowledge building.

*Appropriate methodologies:* The idea of teacher-led development work (Frost and Durrant, 2002, 2003a) provides a step-by-step approach in which particular materials and techniques are used to model and guide a process of values clarification, reflection on development needs, consultation with colleagues about development priorities, negotiation of strategic action plans and the leadership of development work. This is just one approach and is being constantly refined and developed. It remains to be seen whether this can be adapted to different cultural settings.

*Partnerships with external agencies:* Arguably support from external agencies is important whether this be the local authority, professional associations or national agencies for school improvement or quality assurance. Arguably, university departments of education have a special role to play because of their independence, access to literature and skills for guiding

reflection, but any external support has to be mediated through genuine partnership arrangements so that external agencies do not simply replicate their normal habits of thought and operation.

*Deliberate cultivation within school:* Teachers are unlikely to sustain their capacity for leadership or successfully undertake a development project unless they have active support from their colleagues and in particular from the senior leadership team. There is a growing body of evidence that illuminates the role of senior leaders in facilitating teacher leadership (Andrews and Lewis, 2004, Mylles and Frost, 2006). There are very specific things that head teachers do such as making additional time available or helping to facilitate opportunities for collaboration, but the more fundamental task is concerned with culture building or creating the conditions in which teacher leadership can flourish (Frost, 2004).

*Appropriate contexts for knowledge building:* The nature of professional knowledge and the means by which it is generated are crucial in shaping professionalism. If teacher leadership is agential – if it is about the role of the teacher being extended such that all teachers can contribute to the development of professional practice - then it has to have a knowledge creation dimension. Support for this can be provided through networks and communities which exist to enable teachers' accounts of their leadership of development work to be articulated and broadcast. One example is the HertsCam Network in which a partnership between schools, the local authority and a university provide a context within which teachers can share their practice, engage in dialogue and publish authoritative accounts (Frost, 2008c). Other examples would include CANTARNET led by Judy Durrant and the Coalition of Knowledge Creating Schools led by Susan Groundwater-Smith in Sydney, Australia.

The ITL project enables us to examine, through a process of action research, a range of support strategies to see what is efficacious in a variety of cultural settings. What might emerge is a set of principles for practice which could inform the development of teacher leadership globally and a bank of strategies, techniques and materials that could be adapted for a wide range of settings.

## **Our methodology**

Having conducted an initial cultural analysis and reflected on this in our project team meeting, we turned our attention to the cultural context of the schools we planned to work with. It is impossible to understand the schools without having considered the economy, the political system, the policy environment and other cultural dimensions.

The next task was to try to explore the obstacles we face by making a more focused assessment of the conditions in our project schools. A comprehensive survey of the views of all teachers and all students would not be practical given the resources to hand - the tasks of design, translation, data collection and analysis would be very labour intensive. Therefore we must use more practical methods whereby data can be easily collected from a sample of people and can easily be validated through discussion with people we have easy access to. In addition to helping us understand the challenges we face our initial exploration of the school conditions could also help to engender a dialogue with senior leaders and teachers about the conditions that favour teacher leadership as part of the development of our programmes. The approach we are using is based on the idea of portraiture (Lawrence-Lightfoot, 1983; Lawrence-Lightfoot & Hoffman-Davis, 1997) which has echoes of both ethnography and school self-evaluation (MacBeath, *et al.*, 2000). It does not imply a judgement about the effectiveness of the school or its leadership. The idea is to collect views from teachers, students, headteachers and others about the nature of the school as a learning community. A number of tools can be used to collect these views. Then, a researcher uses this data to sketch an initial portrait which might include images as well as words. The portrayal is then fed back to significant groups and individuals and adjusted to take account of their reactions. The process is one that shapes the portrait but also provokes a dialogic process that can lead to change.

The portrait is not a reliable interpretation of hard data. It is assumed that it will be difficult to collect good quality data from a valid sample of teachers and students. The validity of the portrait is ensured by the artfulness of the researcher in listening, interpreting and writing up their understandings and by the extent to which the researcher can get feedback on the initial sketches in order to produce a more reliable portrait that is acceptable to a wide enough range of people. The main tool for gathering the views of a range of people within the school is the Audit instrument which draws on a number of sources including the literature on Professional Learning Communities (Bolam *et al.*, 2005), the Leadership for Learning principles (MacBeath *et al.*, 2006) and the Developing Teacher Leaders project (Crowther *et al.*, 2002).

Having conducted the school portraiture exercise, the next task is to set in motion a programme of support which can then be monitored and evaluated as it proceeds.

### *Monitoring and evaluating teacher leadership programmes*

In some contexts the word ‘monitoring’ has unhelpful managerialist connotations. It is used in this context to refer to the way in which we can look at a process in action by gathering data continuously or at regular intervals. In order to do make sure that we can evaluate our programmes, we need a good supply of data that will challenge our personal perceptions and enable the participants to play their part in the evaluation of the programme. We have designed a set of data collection tools which can be used as part of the action to support the teacher leadership programme. For example, a tool which supports a teacher leadership group members’ reflections about the impact their projects are likely to have on practice within the school and the perceived obstacles to that will also generate useful data which will help the group facilitators to evaluate their practice in supporting the process.

Our action research methodology enables us to gather data that can be used both to evaluate programmes and also to feed the international discursive process. Members of the project team and the teachers and principals in the participating schools will be drawn into a process of discussion and collective evaluation in order to build our knowledge of how to support teacher leadership and to make this knowledge available to the wider professional communities in Europe.

### **Conclusion**

The optimistic view expressed by the founder members of the project team about the possibilities and potential for teachers to become more influential in their schools and their educational systems has met with encouraging waves of enthusiasm. We have found that teachers, advisors, school principals, policy activists and researchers in many countries can see the sense in the idea that educational transformation can be taken forward by mobilising the energy and creativity of teachers, enabling them to lead processes of innovation and development in their schools.

The professional knowledge arising from the flowering of teacher-led change is twofold: first there is knowledge about how to teach and facilitate pupils’ learning. This is grounded knowledge, tried and tested in the field; knowledge that is trusted by other teachers who respect its authorship. Second, there is knowledge about how to initiate change, manage

processes of innovation and develop practice; not just that of individual teachers but that which becomes embedded in the life of the school.

With the right kind of support teachers are able to exercise leadership, becoming more influential by acting strategically to embed new and improved practice in their schools. Thus improvement and innovation is not reduced to the idea of implementation led from the top but is seen instead as an outcome of teachers' leadership in which they persuade their colleagues to collaborate with them. This is not to say that top-down policies and change strategies have no place in educational reform; far from it, but it does imply that policy makers will need to focus more on the art of support and orchestration rather than the pseudo-science of design and 'roll out'.

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**Contact details:**

**David Frost**

University of Cambridge, UK

[dcf20@hermes.cam.ac.uk](mailto:dcf20@hermes.cam.ac.uk)

# Using Research Circles When Developing Daily Social Care for Elderly

**Marianne Westring Nordh**

Research manager at FoU Jämt Midsweden University

There has been a discussion in Sweden for some years about how elderly people in community elderly care will get better access to an “every day social life” existence. This expression can imply things as getting out for daily walks, someone reading for you or a pleasant meal, etc. (Westlund & Sjöberg 2005). The common perception is that the community elderly care can’t supply this.

Our commission was to find out how this “every day social life” works out and implement Antonovsky’s theories of salutogenesis and his model for “sense of coherence” in a way that increase “every day social life” for the elderly.

The term salutogenesis describes an approach focusing on factors that support human health and wellbeing, rather than on factors that cause disease. More specifically, the "salutogenic model" is concerned with the relationship between health, stress and coping. The sense of coherence, according to Antonovsky, has three components:

- *Comprehensibility*: a belief that things happen in an orderly and predictable fashion and a sense that you can understand events in your life and reasonably predict what will happen in the future.
- *Manageability*: a belief that you have the skills or ability, the support, the help, or the resources necessary to take care of things, and that things are manageable and within your control.
- *Meaningfulness*: a belief that things in life are interesting and a source of satisfaction, that things are really worth it and that there is good reason or purpose to care about what happens (Antonovsky 1987).

The public organisation of social care services in Sweden is based upon humanistic traditions and general solutions financed by taxes. One of the goals is that social service is to be given in a way that takes care of the individual’s needs and wishes. It must be done to protect the integrity and support of the remaining physical and mental functions. (Nyqvist Cech 2001, Bergstrand 2004).

One of the Government welfare goals is that the participation and motivation of all employees and the elderly shall be secured through increased influence and dialogue. Interactive and participatory action research can be a way of supporting organisational development.

In this case we have worked with research circles, together with all 40 employees who work in this special housing for elderly people with special needs.

The employees were supposed to develop the every day social activities for the elderly at one housing for the elderly. Social care, in this case, consists of professional collaborations and relations with people living there. It is through these relations between employees and the elderly that daily work is maintained and the employees use themselves as tools in the daily work (Nyqvist Cech 1998, Westring Nordh 2002a and b).

The purpose with the research circles was

- to create more meaningful social contents in *daily* social care
- to create structures for organisational change and development

Methods we used was

- recognising routines and activities already existing in the daily work
- observations
- writing diaries
- planning and realizing activities
- evaluation of activities

The researcher's responsibility in the research circles was to lead the circles, some times act as a catalyst, write down notes and sum up every circle.

### **Step one**

The employees, the two unit managers and me as research leader met once a month, in three groups, for four months. The research circles depended on Westlunds and Sjöbergs book, *Antonovsky not Maslow – for salutogenesis in social and medical care (my translation)*, and the employees own studies of their daily work. Westlund & Sjöberg compares two patterns of social care, one is based on routines and one is based on meaningfulness for the individuals.

<b>Aspect</b>	<b>Antonovsky</b>	<b>Maslow</b>
Personal housing	a flat	a room/some place
Focus for employees	Meaningfulness	Survival
Employees orientation	Relations, individualism	Standardized routines
Fellowship	Self chosen	Forced
Place of meeting	Many and often self chosen	Few and often as entertainment
System	Open to the world around	Closed to the world around

The research circles ended up into planning and realizing activities that increased daily social activities for the elderly. The planning and activities were evaluated when they had worked every two months.

Already at the first research circle there were many different dimensions in the course of their daily work.. One of them was the dominance of work done by standardized routines. Most of the diary texts shows that it was the primary needs of the elder that were satisfied.

There were some of the employees who wrote stories in which the elderly persons were involved, a way of work that shows a closer relationship and understanding between the elderly and employees.

*I was at one elderly home and was sitting at her bed. I put the cat (the imager) at her side so she could come to peace*

To be with the elderly and/or do something together with them was not an obvious activity in the daily work. When this second dimension of work was expressed in their stories it showed how employees felt insecure with each other. Many of them felt they “ran away” from work if they stayed too long by the elderly.

The following dialogue brought out that most of the employees felt the same way. This implies that what counts as work is all of the instrumental and routine activities during the day as cooking, cleaning etc. To stay with the elderly in different kinds of social situations did not count as a work situation. Instead it was expressed as a “golden touch” of existence.

## **Relations in work**

One way of structuring relation building between employees, the elderly and their relatives in Swedish elderly care, has been to create professional relationships, in what we call contact-persons.

The purpose of having contact persons is that the elderly and their relatives shall have a special person to relate to. For the employees it will be a possibility to build up closer relationships and by doing that, get greater understanding of the elderly background, earlier living conditions and their individual interests.

During the research circles the employees often returned to talk about how ill and disabled the elderly were and that the elderly didn't want to, or couldn't do so many things. In the same dialogue some of the employees raised the issue that they felt it indiscreet, nearly insulting to ask the elderly or their relatives about their earlier life and living conditions. One of the employees remarked that it is a distinction to be curious

*Curiosity can be used to make somebody's life better and curiosity can be snooping around ...it depends on our own estimations what it will be*

## **Studying and carried out themes**

All employees agreed in not putting too many themes in action at the same time. This resulted in two themes for each unit. Beyond meal situations, the possibility to get daily fresh air, some daily activity and time to realise them all became the most important themes. After a meeting with the administrative manager and the local manager it was decided that the employees could use five working days a year, compared to theirs hours of employment.

## ***Meal time***

All employees thought that the meal situations were very hard. The elderly were anxious and a lot of them were loud and disturbed the others in lots of ways.

One unit is split in two divisions, one at the top floor and one at the bottom floor. None of them have an ordinary dining room. They have to use the day room as dining room at meal time. During the observations we could recognise that all the elderly persons were sitting round the table for a long time, just waiting for employees to serve them lunch or dinner. This resulted in several of the elderly getting anxious and disturbed. Some started to sing, some hit

the table and some started to shout loudly. No one was really talking to any of the elderly unless to reprimand some when they tried to “help” their neighbour to eat, or if they were trying to leave the table.

Questions raised at the time were if some of the elderly could fetch their own meal, would all the elderly want to eat in the day room, could they leave the room if they wanted, if so could they get help if they needed to?

Some answers were that employees did not ask the elderly where they wanted to eat their meals or with whom they wanted to sit. It was the employee decisions.

There were a lot of proposals on how to control this situation. They started a dialogue about how to get it calmer within the conditions they had. They decided to split the large tables into smaller groups. They should try different constellations around the tables and put some named mats on the tables at meal time to make it easier for the elderly to find where to sit.

Today there is a table for some of the women and another table for some of the men who want to sit together. There are mixed tables too and there are mats with their names on at meal time. Very anxious or shouting elderly get accompanied to their rooms by the employees so they can eat there. The effect of these measures was that it became calmer at meal time and the elderly eat more and seems to feel better.

### ***The other unit***

The other unit at the housing has a dining hall down at the entrance floor. Their observations made them attentive of how they could be the one who *triggered* the elderly at meal situations. The employees constantly moved around in the dining hall asking the elderly if they wanted more to eat or if they were finished. This unit also noticed that they didn't ask the elderly as a routine where they wanted to eat their lunch or dinner or with whom.

The employees at this unit decided that a maximum of two employees should be at the meal carriage and serve the elderly. One of them has the responsibility to follow anxious elderly to their room if necessary and the other has the responsibility to be hostess at a special table, when lunch or dinner was served. Two of the other employees should help feed the elderly when needed. At one pm, at the earliest- lunch time finished and employees were allowed to clear the table.

The hostess at the special table had the responsibility to document special things happening at meal time in a special log book. The purpose for this documentation was to be more attentive to things that occur, so they could do something about it.

It went calmer in the dining hall and the situation at the meal carriage was much better then before. When employees asked, more of the elderly decided to eat in their own flat or together others. The employees changed where to place the elderly with wheelchairs, so it became more accessible for them.

They could recognise that the elderly ate better than before and it was more quiet in the dining hall.

### **Possibility to get fresh air daily**

Nowadays the employees have to follow the elderly out every day and it is very difficult to manage so everyone would go out once a day. During the project the employees decided to make a schedule so that they should know which one of them was responsible for the daily walk. They decided that the one who started work at lunchtime was the one who should take one or more of the elderly for a walk. The purpose for this activity was that all elderly should go out at least once a week and get fresh air. The walk should contribute to new impressions and stimulation for the elderly.

The positive effects when they were out walking became a sense of well-being for the elderly and they got a piece of solitude moments together with some of the employees.

### **Sitting gymnastics practice**

Two employees were responsible to realize the sitting gymnastics practice with the elderly who wanted to. The purpose with this practice was to create social stimuli through physical activity. The elderly should be looking forward to the practice situations. It would also help them to keep their body and soul in form and with better mobility.

The employees who were responsible for the practice had by turns once a week some of the elderly who were stiffer in their body and the other week those who had better mobility. The elderly who were practicing were smiling and had fun. These gymnastics moments were followed up with a cup of coffee and moments of small talk and deeper conversations with each other. These were very appreciated moments by the elderly and were definitely an

increasing social activity when it also led to small talk during the week.

## **Reflections**

During the first research circles everything felt so difficult and many of the employees felt anger and they had no trust in that it would lead to any change. Some of them didn't want to make any change. *It will be as it always has been.*

Things that from the beginning felt so bad and so forced transformed into a lot of positive responses. One thing the employees really appreciated was that the research circles led to continuous employee meetings, where they could discuss the elderly persons living situations as well as their own working situation. The majority felt it overwhelming and very new in the beginning. In reality there were only small details to adjust. Now they feel that their working day and the elderly' social life have been improved and are more stimulating.

Since the researcher comes from the outside and is not part of the organization or the working unit, he/she can see things which are not entirely obvious within the group (Aagard & Svensson 2006). He/she can also point out certain phenomena and attitudes in the everyday life of the organization and come up with suggestions, which would not be so easily accepted if they had come from the group itself. This is a consequence of the fact that the original group has constructed unwritten decisions and conversation patterns, which only exist in the shape of invisible knowledge (Molander 1996). These patterns are part of the organization's power structure and when you, as a researcher or new employee, enter the organization you are not familiar with all these unwritten laws and codes of conduct. This means that you consciously or unconsciously might transgress different boundaries of social norms, which per se can be the phenomenon that increases the speed of the process. When a situation like this occurs it is important that the researcher remains in the process and continues to stimulate a mutual reflecting dialogue in the organization/working unit (Dachler & Hosking 1995). In this case where all employees participated, we really could work with their own power structures in the group. Those who earlier had put the norms in the group sometimes had to take a step back and let another of their colleague's voices be heard.

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## **Contact details:**

### **Marianne Westring Nordh**

Research manager at FoU Jämt Midsweden University

[marianne.westring-nordh@miun.se](mailto:marianne.westring-nordh@miun.se)

# Capacity Building of Educational Personnel through Action Research and Reflective Practice

Four STORIES out of FIFTY FROM  
SRI LANKAN TEACHERS AND IN-SERVICE ADVISORS



Department of Research and Development  
National Institute of Education  
Sri Lanka  
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## **Introduction**

Of all professionals involved in education to achieve the goals of education in Sri Lanka, it is the teacher at the school level who works with close contact with students. The responsibility of developing pupil competencies by adopting the syllabi designed by the National Institute of Education (NIE) appropriately also lies in the hands of the teacher. In-service Advisors attached to Zonal / Provincial Education offices, facilitate the task of the teacher. To this end, In-service Advisors maintain formal contacts with the higher-level officials of the Ministry of Education, the National Institute of Education and the Department of Examinations.

The Research project on ‘Capacity Building of Educational Personnel through Action Research (AR) and Reflective Practice (RP)’ was launched by the Department of Research and Development of the NIE in 2007, with the intention of development of professionals involved in three levels:

- New officers of the National Institute of Education
- In-service Advisors in Provincial/Zonal/ Divisional Education offices
- Teachers at school level

The specific objectives of the research project were:

- To inculcate an AR and RP based professional culture at the National Institute of Education, Zonal level and school level;
- To develop in professionals the competencies related to the five themes, remedial teaching, psycho-social care, disaster and risk management, peace and value education and second language learning that form the foundations for the GTZ programmes;
- To identify how those themes link with the learning-teaching process and to develop models related to them;
- To document creative and innovative practices of teachers and In-service Advisors and to disseminate them among the stakeholders;
- To present grass root level proposals for alternative policies in the field of curriculum and teacher education with reference to the roles of teachers and In-service advisors.

25 teachers and 25 In-service Advisors, who were selected through a newspaper advertisement, completed these research studies, relevant to their professional roles, with the assistance of the officials of the National Institute of Education. Teachers and In-service Advisors followed the under mentioned steps of Action Research:

- Identification of problems relevant to their professional fields

- Analysis of the background environment connected with those problems
- Reflection of experiences that evolve through analysis
- Identification of solutions and implementing them
- Evaluation of the results of the implemented solutions.

With a view of achieving objectives, the entire research process was implemented with an inductive approach giving opportunity to surface the pulse of the grass root level. In the workshops held at the National Institute of Education, guidance was given to teachers and In-service advisors in a friendly manner to make in-depth observations of experiences at their service stations. Based on the range of experiences and observations, each teacher and In-service advisor identified problems for researches. Therefore, the breadth and depth of the problems reflect the role of each professional. Though various strategies of investigating problems were introduced at the workshops, the researchers had the liberty to select techniques, which are appropriate for their roles and could be used in practice. Based on the data collected, they themselves defined the problems and designed plans to solve them. Moreover, the teachers and In-service advisors decided and identified how their research studies fit into the five themes on which the GTZ builds up its projects. Hence, the project was planned so that the grass root level rhythm emerged which in turn gave rise to the research methodology.

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The research project was planned in such a way that cordial interrelationships were established among the professionals of the three levels and their creative capacity was developed. The outputs of the research are the under mentioned documents.

- The project report prepared by the Department of Research and Development on the research process.
- Fifty research reports prepared by the teachers and In-service advisors.
- The policy booklets including specific suggestions and containing ‘alternative policy documents’ presented by teachers and In-service advisors. These suggestions have been presented in a way that they could be used of by professionals involved in curriculum development and teacher education.

In contrast to AR initiated by the sentiments of professionals, these AR were commenced under the direction of external institutions to spur the tacit knowledge of the professionals and to blossom and generate sensitiveness. On this foundation, the foregoing documents can be considered as the primary sources, which disclose hidden creative capacities of teachers, In-

service Advisors, armature researchers and professionals in Sri Lanka.

Basically, an Action Research bestows an understanding, which is specific and suitable for the respective professionals. Yet, these documents can be used in various occasions as reservoirs of resources which may be used by other professionals in the form of grass root level knowledge, skills, attitudes and examples.

Even though an objective of AR is reporting and therefore the disclosure of tacit knowledge in a professional, reporting brings forth only a small part of this knowledge. A larger bulk of knowledge still rests invisible, yet active in the minds of the professionals. The seminars disseminating research findings and mass media forums are the means which help unveil this active ‘tacit knowledge’. The national level research seminar held on 03.12.2007 offers an opportunity for the former. The professionals who participated in the research project have already been given an opportunity to express their ideas through the ‘Nipuna’ radio programme broadcast by the National Broadcasting Service. Steps were taken to submit the research findings in local and foreign conferences (Sri Lanka Association for the Advancement of Science: 2007 & 2009, International Conference on Education and Imagination at Canberra, 2008: two papers on the relationship between Action Research and Imagination; CARN conferences 2007 and 2009). In addition, occasions need to be created regionally to disseminate research findings by organizing professional forums.

It is anticipated that research teams would get involved in more and more Action Research studies in the future and develop their professional roles and also present policy suggestions at the grass root level.

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The research project paid attention to three streams of theoretical knowledge that could be taken into consideration by policy makers in education. Based on those theoretical streams of knowledge, the following suggestions were put forward.

- To adopt the approach of applying remedial measures after the identification of the causes of “diseases” as is done in the medical field:  
The attempt made by an In-service advisor to widen the vision of a teacher who had been confined to the text book and the attempt made by a teacher to remedy the writing difficulty of a pupil are examples.
- Recommending new teaching - learning strategies or suggesting alternative strategies in place of the existing ones taking cue from the engineering model which treats education as a mechanism:

e.g.: Suggesting ‘bottom to top’ style instead of top to bottom’ in copy writing is an example for recommending a new strategy.

e.g.: Suggesting alternative behaviour patterns for teachers to spend the first five minutes of a period fruitfully and learner friendly.

- Making suggestions to arouse enlightenment of professionals: Suggestions regarding teacher behaviour and punishment are examples.

Dr. Godwin Kodituwakku (Director)

and

Dilani Hettige (Assistant Project Officer and Project Coordinator)

Department of Research and Development, National Institute of Education, Sri Lanka,  
[tuwakku@gmail.com](mailto:tuwakku@gmail.com)

## LET'S LEARN FROM STUDENTS

(Theme: Remedial Teaching)

**R. M. M.C. Ratnayake**, Teacher in English

192/47, Mahiyangana Road, Badulla, Sri Lanka

E-Mail: [mrmenaka@gmail.com](mailto:mrmenaka@gmail.com)

The Competency Based Approach was introduced to be implemented in the learning- teaching process, under the curriculum Reforms 2007; to change the teacher's role from the old role of transmitting and transaction to the new role of transformation, to make the students master competency levels designed by the educational policies is the most significant change. Here, the competencies should be mastered through an activity plan, planned according to (5Es) Engagement, Exploration, Explanation, Elaboration and Evaluation. The argument was formed between me, some teachers and the ISA during the workshop for introducing the competency based approach and paved the way for me to carry out this Action Research.

When the concepts of group work and giving less priority to text books were explained by the ISA that was conducting the workshop at that time, I raised the arguments of individual development, group work in overcrowded classrooms and parents' expectations towards less priority to text book. Based on literature by ISA, I was motivated to carry out my Action Research on the problem of "Reaching individual development of students through implementation of group work". Group work is the foremost technique in the competency based approach. Here, the curriculum developers expect a drastic change in the role of the teacher. "Will I be able make a drastic change in my role which in turn will achieve the expected development of Students?"

After the thorough study of documented facts based on the Competency Based Approach, the process of change is observed by me regarding myself, school and society.

I finished school in 1991 and the past 16 years have changed me from a secondary school student to a 10-year experienced teacher of English, in the same school where I studied. Significant changes have taken place in the school especially in regard to the number of students and physical resources.

The most significant change I observed is the screw pine bush rising above the three storied Arundathi hall (a new building) with its long brownish dark green leaves which during the

time I was a student, was a smaller plant not taller than me with tender yellowish light green leaves.



As the screw pine sapling has grown into a hard taller bush spreading its leaves, the socio economic changes have changed the social expectations and in turn they changed educational expectations. In this process from time to time educational reforms are introduced and this way the Competency Based Approach has come into the educational field.

I received the permission from the principals, the provincial director for English and Zonal head of English and started collecting facts about the 54 students of grade 10 D. Their interest towards group work, their feelings about earlier methodologies of learning English, and their standard of English were identified through a Questionnaire and their written comments.

According to the collected facts, they were not very satisfied with their earlier methodology of learning English and approximately half of the class didn't have an interest in group work. Moreover, questionnaires, formal and informal interviews, observations, a reflective journal and students' comments were used as techniques for fact finding.

In the intervention, comments of students before and after giving marks of the 2<sup>nd</sup> term test and the group work carried out by them in my absence were used as analysis of implementation of selected activity plans. In every point that change is shown, it is highlighted as special findings. Also at the end of each intervention students' comments which are rich in actual details are given. These comments are given in Sinhala first and later in English, a fact which highlights their language development.

Finally I really understood that I have been positively changed in regard to time management, skills such as listening, speaking, reading and writing, teaching restrictions and finally recognition by the heads.

As regards students, they developed their language skills, communicative skills, attitudes,

values, with the real experience of learning in the changed environment. The joy of group work made learning easy and the positive interaction filled the gap between brighter and weaker students. The competition was co-operative and the joy limited difficulties such as crowded classrooms. Individual development is obvious in all aspects.



Drawbacks were also recorded and concerned equal distribution of resources, time management, one-way process of gaining the knowledge of new reforms, over- crowded classrooms, dissatisfaction of brighter students, examination-oriented education system, students' and parents' expectations, equality in the training of teachers, paper setting, mismatch of TIM and instructions given in trainings.

Teachers involved in planning the curriculum, enlightened principals in regard to reforms, training teachers before implementation of a reform, enlightening parents and students on reforms and preparing text books on competencies are suggested as remedial measures.

This Action Research concerns remedial teaching and the comments made by students in the process of fact finding reveal what the teachers and students should do to achieve change. Therefore, I decided to introduce a book containing students' comments and my reflections, to be used as a guide for teachers and students in their efforts for change. Also, I will introduce an activity book with the activities prepared by students for their engagement in the teachers' absence.



Throughout the action research I was enlightened about the needs of students and I made my necessary changes in time. Actually I was changed and I must say this to teachers “Let’s learn from students”, and students will say “We’re ready together”.

## 2

### AWAKENING



(Theme: Psycho Social Care)

**H.M. Suchinha Watagodakumbura**, Teacher in English

60/6 4<sup>th</sup> Lane, Aruppola, Kandy, Sri Lanka

E-Mail: [swathgodakumbura@yahoo.com](mailto:swathgodakumbura@yahoo.com)

I am a trained teacher of English who has sixteen years of experience in the teaching profession. At present I am attached to a Model school in the Kandy district, which has classes from grade one to eleven. Prior to my arrival to this school, in the year 2005, I served in six schools of different types, 2C, 1AB, 2C, 2C, 1B, 2C respectively, in the same province. During my career, I have tried my level best to provide opportunities for my students to use their target language as much as I could.

*Students using the target language in real life situations*



Fig 2: students engage in preparing Power Point presentations



Fig 3: A student is presenting something using pps



Fig 4: students are the functional exhibition – (fair)



Fig 5: The writer is explaining the items of the exhibition to a native speaker of English

2005 was one of the land-marking years in my career life, because it was the year in which I was selected to follow the one-year Diploma in Teaching English as a second Language course, at the National Institute of Education, at Maharagama. Since small scale Research Methods and Education Technology, was one of the major components of that course, an action research had to be conducted at the end of it. Although I had completed the course, I was not competent in regard to action research at that time. Anyhow, under the guidance of my supervisor I managed to complete it.

My knowledge and competency in action research was enhanced with my joining the series of workshops on “Capacity Building of Educational Personnel through Action Research and Reflective practice – 2007”. Through these workshops, I learnt to conduct an action research methodically. My power of reflective thinking as well as the ability of writing was improved as a result of joining this research. Not only that, but my presentation skills also improved with my selection to do this action research. I also learnt the value and importance of punctuality since it was a significant factor throughout the series of workshops.

I also obtained the very rare opportunity to associate with the scholars in the Department of Research and Development at National Institute of Education (NIE) and to enhance my strengths.

Last but not least, I became an important icon among the teachers in my education zone, since the Department of Research and Development at NIE had considered all the teacher researchers as resource personnel.

As a teacher, it is my duty to see that all the children in my school should not only have a right for “Education, but for “good education” that would make him/her a “good” human being. To be a “good” human being it is a must for children to receive education outside their text books because I don’t see any balance between the “knowledge’ and the “qualities” in present day children.

Having this idea in my mind, I identified my problem as “Lack of knowledge of self awareness” in my students. Through my experiences, I perceived that this was not a unique problem to my school, but for the majority of schools (80%) in Sri Lanka.

As far as I know, students are considered as under-age population who are not capable enough to mould their own personalities to become “good” human beings. Since the society expects schools to do so, as a teacher, I thought that I too was responsible in molding good citizens. Therefore I decided to conduct my action research in order to raise the self-awareness of my students, which had not been done by any of the teachers in my school before.

My reflective journal, photographs, observations, questionnaires, interviews, office documents and the books that my students produced were the base in order to collect facts for my research.

**Step 1**

Observed unclean and untidy students during the morning assembly and class hours

**Step 2**

Interviewed a selected group of teachers

**Step 3**

Decided on my research topic and part of risk students (Sample)

**Step 4**

Administered questionnaires to all the five classes, where the risk students were.

**Step 5**

Decided on my final set of ten students (Sample)

**Step 6**

Collected data from the school mark books.

**Step 7**

Carried out my intervention programme for 1 - 2 months period while the interviews were carried out within the targeted group

**Step 8**

Obtained feedback from parents

**Step 9**

Analyzed the facts found from the students' books of Merits and Demerits.

**Step 10**

Took my students to Mahaweli National College of Education, in order to give them the opportunity to listen to a lecture delivered by the lecturer – counsel, regarding building up “self awareness”

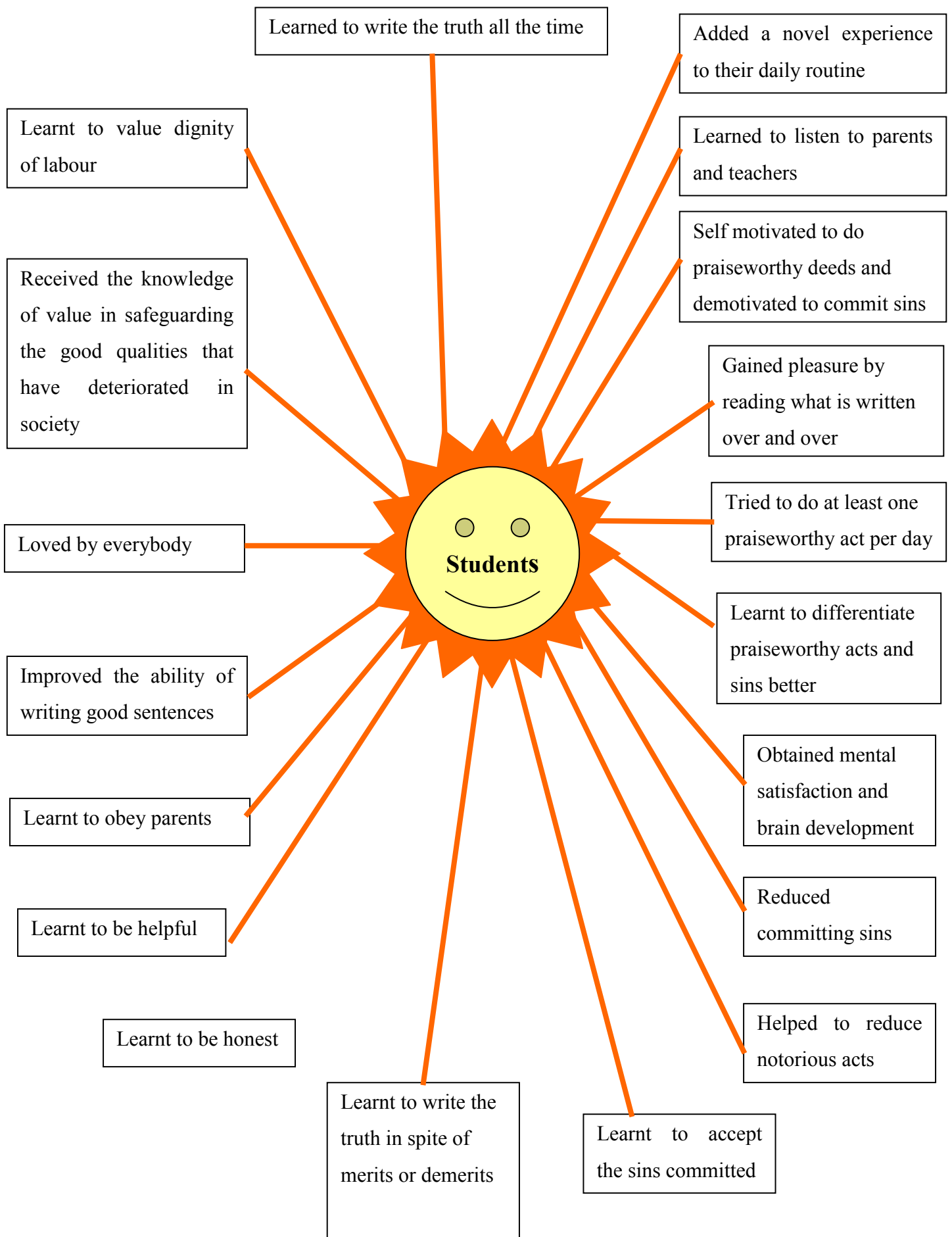
**Step 11**

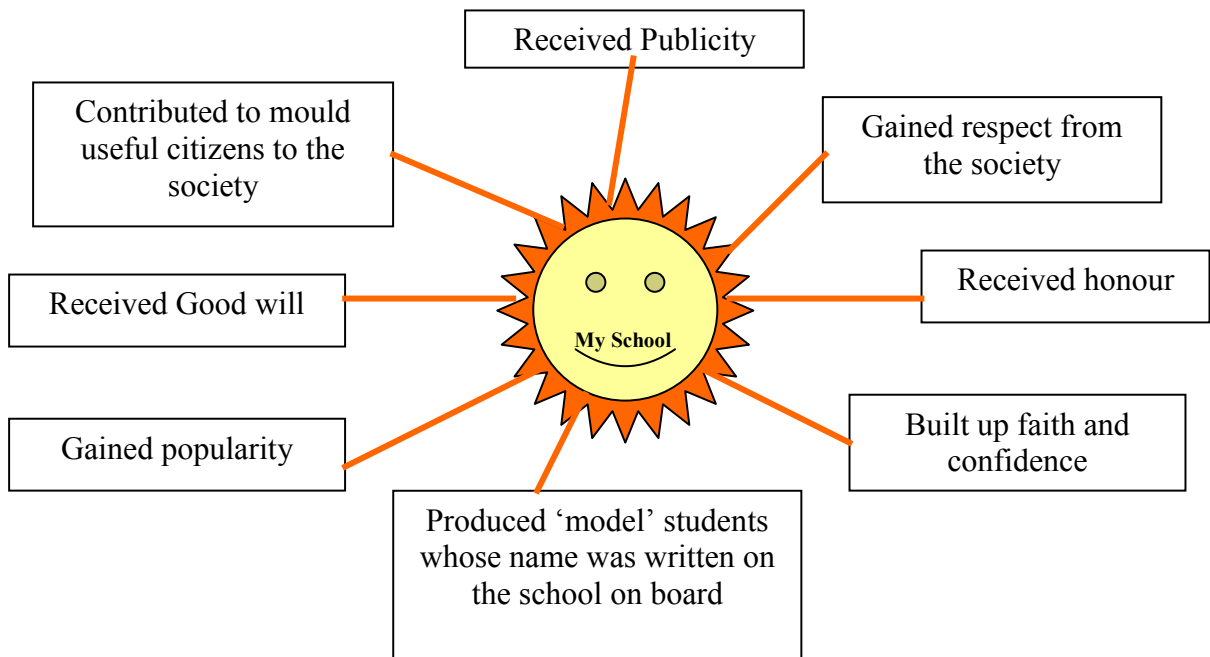
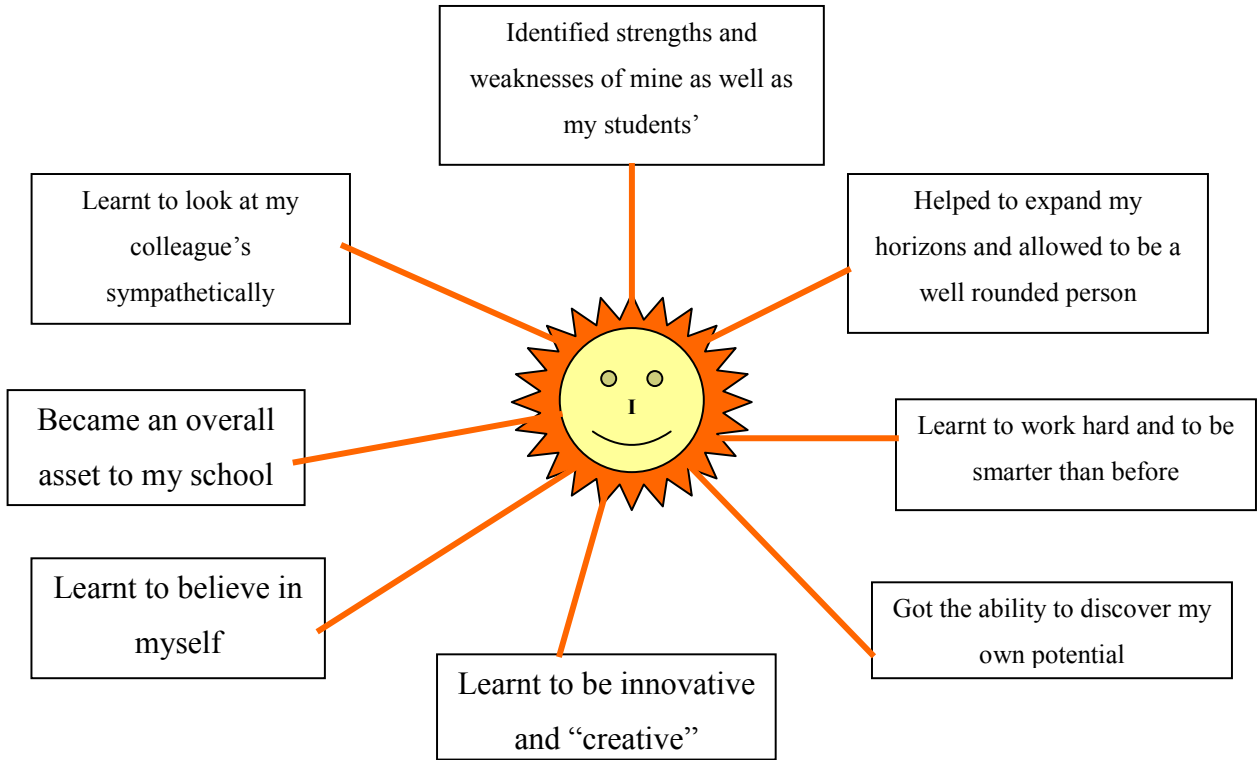
Obtained feedback about the lecture and the books of Merits and Demerits from the students

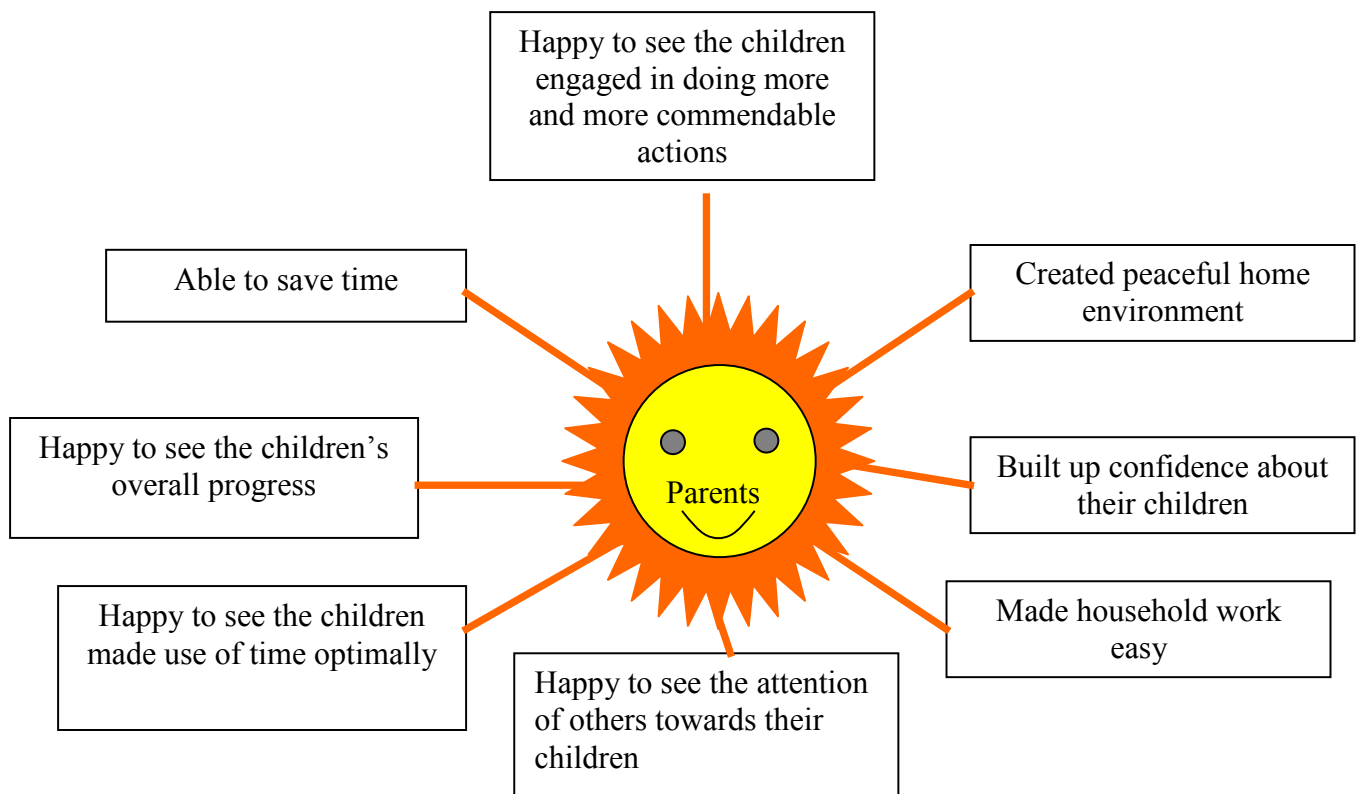
**Step 12**

I wrote the research report.

Following, graphs will display how my students, I, my school and the parents were benefited from my action research.







Throughout the research, I tried my level best to abide by the ethics that must be followed by a researcher, in the following manner

- Obtained permission from the head of the school to carry out the research
- Made the students aware of my research prior to commencement
- Shared the gathered facts and information with my colleagues while and after the research was conducted
- Made sure not to harm the benefactors in any way
- Made sure that all the participants understood the research
- Collected facts securing the privacy of the benefactors
- Collected data without disturbing the school work
- Made sure to include true facts for the research report
- Mentioned the 'source' whenever a quotation was included in the research report
- Secured collected facts carefully
- After my suggestion a booklet on "Instructional guide for teachers in Sri Lanka" is to be published shortly under the heading of "Let's think about our students".

### 3

#### HEY! WE TOO, LOVE TO LEARN - WHY NOT TEACH US TOO

(Themes: Peace and Value Education, Remedial Education, Psycho Social Care)

**E.P.Padma Ekanayake**, Teacher in Mathematics

Ak/ Pothuvil Sinhala School, Pothuvil (East), Sri Lanka

Email: [tuwaku@yahoo.com](mailto:tuwaku@yahoo.com)

While serving as a planning technician, I entered the Teacher Service in 1990 as a trainee teacher since I liked the teaching profession. I have served in three schools in the Western Province. After getting married, I got a transfer to a school in Kandy and while serving there I followed the Bachelor of Education course in the National Institute of Education and got the B. Ed. Degree with distinction. In year 2004, I got a transfer on my request to a school in Pothuvil in the Akkaraipattu Education Zone in Ampara District in the Eastern Province. Since then, I serve as a teacher of Mathematics in that school.

It was a school with minimum facilities situated in a disadvantaged area. Having observed the poor situation of the school, I determined to do a maximum service to the school using the knowledge and experience that I had gained so far in my teacher life.

In year 2007, there were only two girls and one boy studying in Grade 6 and I felt those pupils had been neglected in school management and in classroom management. In an area that suffered by terrorism, tsunami disaster, economic difficulties and where the Sinhala population had become the minority group, those three pupils had come to school for many years, but had not achieved competencies due to be gained even by pupils in Grade 1. As the teacher of Mathematics I faced the problem, how to teach the Mathematics syllabus taught in Grade 6.

In finding suitable strategies to teach those pupils, I attempted to make use of strategies that I had learnt in following the B. Ed. course. In the meantime, I got the opportunity to participate in the project on “Capacity Development of Professionals Involved in Education using Action Research and Reflective Practice” conducted by the Research Division of the National Institute of Education. Through this project, I could learn to look at a problem in the lines of a research. Making use of research strategies so far learnt, I decided to do an Action Research on the problem relevant to those pupils. With the consent of the school principal I launched the research with the aim of getting those pupils released from their pathetic situation and to

develop at least basic skills in reading and writing.

In collecting data, several techniques were adopted such as referring to documentary sources maintained in the school, informal interviews carried out with the principal, teachers, those three pupils, their parents and pupils in Grades 7-11 in the school, in-depth formal interviews with the three pupils, observation of other teachers teaching those pupils and collecting information from outside society including parents of the school children.

In analyzing the data collected, the following common characteristics of the three children could be revealed.

- Low school attendance
- Untidiness and disorder in work
- Not socialized
- Difficulty in reading and understanding
- Difficulty in writing
- Not adapting to the classroom culture
- Since they were used to talking in Tamil at home and in the outside environment they were familiar with Tamil Inability to write and read numbers with three numerals
- Not doing exercises given as homework
- When an activity that can be done is assigned giving instructions, doing it without hesitation

Factors, which brought them to that situation as revealed through the analysis of data were as follows:

- Low education level of parents and economic difficulties
- Ignorance of the value of education and lack of expectation levels
- Lack of evaluation and acceptance of those pupils by teachers in the school
- Lack of educated social background
- Weakness in teaching methods and techniques
- Lack of pleasant and friendly teacher-pupil relationship
- Teachers neglecting teaching those pupils giving reasons as “They do not learn”, “Parents don’t take an interest”  
“They don’t attend school”
- Teachers not taking an interest to free pupils from the feelings of self pity and

aimlessness in life

- Teachers not identifying their strengths and abilities
- Not supplying feedback to the pupils

Following, remedial measures were taken for the physical, intellectual, emotional and, social development, as well as the development of determination and courage in those pupils.

- Valuing even their minute abilities in public
- Providing love, kindness and security to them
- Paying attention to individual needs, likes and dislikes
- Providing the teachers' assistance, understanding their needs
- Respecting the pupils' personality
- Giving individual and group responsibilities relevant to physical resources of the classroom and keeping vigilance on their performance on them.
- Paying attention to the exercises given to them
- Supplying children's story books for them to read and allowing them to tell those stories
- Making them understand the value and the need of learning
- Providing opportunity for them to work and play in cooperation with other children
- Developing relationships with their parents and giving them instructions on behaving with children

Through such interventions the following changes were brought about.

- Pupils had minimized their negative attitudes and patterns of behaviour
- They had developed positive attitudes and behaviour patterns
- In addition, the research disclosed the resources that could be mobilized by teachers, the school, Zonal Education Office, Provincial Council and the Central Government to minimize such situations

In the light of the research, I prepared a Handbook for teachers helping them in classroom management in the process of teaching.

## 4

### THEY WOULD TEACH ANY SUBJECT IRRESPECTIVE OF THEIR APPOINTMENTS

(Themes: Education and Peace and Value Education)

**Vipla Nellihela**, In Service Advisor in Science

I50/22, Badulla Road, Bandarawela, Sri Lanka

E mail: [viplanellihela@gmail.com](mailto:viplanellihela@gmail.com)

There are nine Tamil Medium schools in Ella Education Division, which is under Banderawela Education Zone in the Uva Province. In one of those schools there were classes from Grade I to Grade 13. Three schools had classes from Grade I to Grade 11. In two schools there were classes from Grade I to Grade 9. Three schools held classes from Grade I to Grade 5. None of these schools had teachers appointed to teach science. There was no Tamil medium teacher or Teacher Advisor either for the subject science. Responsibility of working as the Teacher Advisor for science had been assigned to me since I was the Teacher Advisor for science in the Division.

Lack of Tamil medium science teacher in these schools was a problem. In those schools teachers appointed for other subjects taught science. Therefore they taught the theoretical facts using the textbook and with much dedication, but they did not have the ability to plan and implement practical activities. Although there were science laboratory facilities in those schools, they were not made use of in carrying out practical activities, since there were no qualified teachers to do that. As a consequence, the effectiveness of teaching science had gone down. G.C.E (O/L) results of these schools remained at a minimum level. The Tamil medium schools catered to the children of labourers in the plantation sector. Their school attendance was at a satisfactory level and the teachers were dedicated to the development of the school. The main cause for low examination results would have been the neglect of practical activities.

It is difficult to learn science concepts without having practical activities. Teachers in those schools had not been called for training workshops on science, since they have been appointed for other subjects. This research was designed to intervene in this situation with the objective of developing competencies in planning and implementing practical tests in science for those teachers. For this, two Tamil medium schools were selected where there were more pupils and grade 10 and 11 classes.

Specific objectives of the research were as follows.

- Preparing a series of practical tests in science for Grade 10 in collaboration with teachers
- Planning practical tests
- Conducting practical tests for pupils by teachers
- Holding a science exhibition with the selected practical tests

Interviewing principals and teachers, observation of classroom lessons, evaluation of pupils' exercise books and observation of laboratory facilities were done as the first step.

Making use of the syllabi, Teachers' Instructional Manuals and textbooks, the following issues were explored:

- What are practical activities?
- What are the competency levels to be gained by pupils?
- What is the importance of implementing those activities?
- How should teachers in the classroom implement them?

The research was launched in three stages as follows:

- Preparing a series of practical activities for Grade 10 science in cooperation with teachers
- Trying out practical tests
- Directing practical tests to the pupils and organizing a science exhibition

Accordingly an Action Research including a pre test and a post test was launched.

From the very beginning the interest and the dedication of teachers and laboratory assistance was a remarkable factor. Teachers tried out tests that were planned, and those experiments were evaluated. An exhibition was held making use of selected practical tests planned by teachers.



The pupils showed an interest in practical activities and at the exhibition, effectiveness of

adopting pupil-centred learning was displayed. Teachers too gained the competency in planning and implementing practical tests.

The long-term solution to remedy the problem was the appointment of science teachers to Tamil medium schools. Until this is done, teaching science by teachers appointed for other subjects has to be appreciated. These teachers should be called for training workshops in the subject of science and should be given training in teaching science without considering the subject for which they have been appointed.

Since I had the chance of carrying out the research with the participation of those Tamil Medium teachers and pupils of those schools, I was able to work in cooperation with those teachers and pupils. It was a good experience for me to work in a friendly manner with them. I hope to implement the planned practical tests in the other schools of the Division.

Through this research carried out with the theme of remedial teaching, peace and co-existence was reflected. Prior to the research, consent and the approval of the Zonal Director of Education, Regional Director of Education, Principals, teachers and pupils of the selected schools were taken and the secrecy of the identity of the participants was secured.



# Evaluation of Organizational Improvement Based on Action Research Utilizing Soft Systems Methodology

*Satoshi Suzuki*  
*Japan Association of Action Research*  
*Tokyo, Japan*

## Abstract

This paper describes an evaluation of organizational improvement that utilizes the Action Research approach, Soft Systems Methodology (SSM, P. Checkland, 1981). And, in conclusion, I show, based on the case study in Company A, that the evaluation of organizational improvement is possible by the model of SSM. I argue that the “actual” situation of organizational improvement cannot be grasped in an evaluation from the outside using objective criteria. Proper evaluations need to be based on approaches that deal with “actuality” (*Omoi*).

## 1. Introduction

I have acted as a facilitator for eight years of a workshop in one of Japan’s largest Information System (IS) vendors, “Company A” (\*1). This workshop explored problems and issues in project management (PM) using SSM-based Action Research (AR). This workshop was attended by System Engineers (SE) from Company A who were directly involved in various projects in the company. These SEs explored the current situation of PM through the models in SSM and learned what the “problem(s)” was in the workshops.

In this paper, I trace the accumulating process of the SEs experienced-knowledge of PM utilizing the model of SSM used in the workshop. By using learning in the tracing, I clarify the process by which the project organization in Company A has reformed through four stages during the eight years I have acted as facilitator. Further, I show there were the four stages in its reforming process.

(\*1) Company A is pseudonym use to protect confidentiality. However, the details discussed with regards to Company A are factual.

## 2. Outline of SSM

SSM is a methodology that activates a cycle of continuous learning in order to improve a situation that people concerned think to be problematical. This learning cycle starts from their straightforward talking about *Omoi* (\*2) that have been affected from problematical situation which they are involved in. Namely, each people reflect on their experience as *Omoi* in the problematical situation. At first, this discussion about their *Omoi* is performed using the

models of SSM (they are called *Omoi Model* (\*3), and Rich Picture and Root Definition are the form of *Omoi Model*), so that a *Omoi* that they can agree as a group regarding the problematical situation is brought from their discussion through accommodation process and they express the *Omoi* using *Omoi Model*. The word ‘accommodation’ here means living with each person's different worldview based on a shared *Omoi* in the level of tacit.

Further, by using *Omoi Model*, action plans that are culturally feasible and systemically desirable are suggested through learning from differences between a *Omoi* of the group and the real world situation.

Those who actually constitute the action plans execute the plans by themselves in the problematical situation in the real world. By complying themselves with the plans, they literally extract learning by doing. At this point, it is expected that new *Omoi* are affected by this action, which can be applied to the next accommodation. This learning process is continuous. [2] [3]

(\*2) *Omoi* is Japanese and *Omoi* (“actuality”) means an ‘auto-affection’ which is appearing to us when we act in the real world.  
 (\*3) *Omoi Model* is a model relevant to *Omoi* (“actuality”).

**3. Reforming the project organization by introducing PMBOK and exploring the problem of PM by using SSM based AR in Company A**

When it entered in the 2000s, since the PM itself became one of the important qualities in development and implementation of IS, the venders of IS had to cope with the continuous improvement of PM by reforming the project organization.

Accordingly Company A pursued reformation of PM from the traditional PM style through the introduction of a Project Management Body of Knowledge (PMBOK) standard. After the PMBOK began to be implemented in PM of Company A, the rate of “problem projects”, which the cost, the delivery time or the products’ specification of project wasn't according to plan, decreased gradually as shown in Figure1.

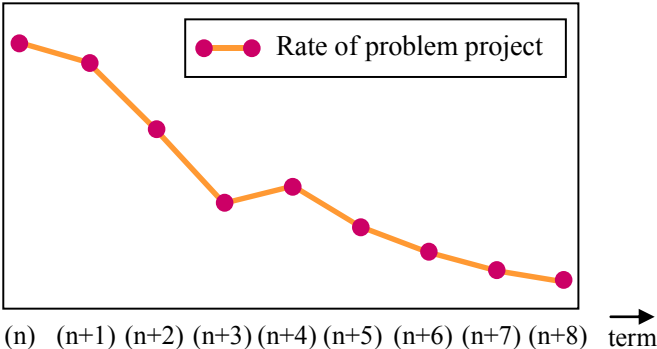


Figure 1 Change of the rate of “problem project” in Company A after introduction of PMBOK

At the same time as Company A began to introduce PMBOK (about eight years ago), Company A also started the workshop using SSM based AR as methodology (this workshop is called SSM workshop in this paper). This SSM workshop explored problems and issues in PM using SSM process. Held at regular intervals each year, this SSM workshop was attended by SEs in Company A who were directly involved in various projects in the company. These SEs discussed with each other their *Omoi* relevant to the projects they were involved in using models in SSM. And they brought out experience-based knowledge through the discussion, explored the current situation of PM by using this model and learned what was a “problem(s)”.

The outline of SSM workshop was as follows;

- (1) Theme of discussion: “What does it mean managing the project?”
- (2) Participants: about fifteen middle managers of SE who are selected by division manager.
- (3) Number of times per year: two times (six days per time)
- (4) The process of workshop  
 Members executed the process of SSM which was described in chapter 2 under the direction by facilitators. After the members expressed their *Omoi* respectively by using Rich Picture (RP), they were divided into small groups of 4-5 people. And their individual *Omoi* related to above theme were talked using Root Definition (RD). (RD is one form of *Omoi* Model, and its expression form is {(z) In order to..., (y) By means of ..., (x) A system to do...}.)

#### 4. The necessity for comprehending the “actual” situation of the workplace of the PM

Since the rate of the “problem project” was decreasing gradually after PMBOK introduction in Company A, it was clear that PMBOK was spreading into the project organization.

Although the introduction of PMBOK had effect on the reformation of the PM clearly, it was not able to be grasped what kind of change had occurred at the workplace of PM. And the manager of Company A felt the necessity for comprehending the “actual” situation of the workplace of the PM in order to pursue the reformation of the project organization by PMBOK effectively.

Then, I who was the facilitator of SSM workshop had been aware that the contents expressed by the model of SSM were changing with progress time, and I got the idea that it was possible to comprehend the transition of the situation of workplace through the changes of expression of the model of SSM. This idea was based on the relation between SEs *Omoi* and their experience in the workplace as Uchiyama states “*Omoi* is appearing to us from between (*Aida*) self and the world in *Ba*”. [4] And it was considered to correspond to following the

accumulating process of the experienced knowledge of SE to trace the change of *Omoi*.

Then, I attempted to trace the change of SEs *Omoi* based on my experience as a facilitator of SSM workshop for eight years by using the model of SSM. And, I also attempted to show what had happened in the workplace of the project by using the awareness in the process of recovering its change.

**5. Transition of the expression of *Omoi***

I pursued the expression of SEs *Omoi* expressed using *Omoi* Model, and traced its change of SEs *Omoi* during eight years as compared to the permeating process of PMBOK. As a result, it turned out that it was possible to divide its change into four stages. Table1 shows the four stages of SEs *Omoi* in its transition which correspond to the permeating process of PMBOK.

And since a *Omoi* relates to a situation of the workplace, it is able to say that the stage of SEs *Omoi* represent the stage of the situation of the project in which SE is involved.

Thus, I reflected on the transition process of SEs *Omoi* along these four stages, tracing the expression of *Omoi* Model. First, the expressions of SEs *Omoi* from Stage-1 to Stage-3 of the four stages are shown as follows. Next, the situations of PM which were comprehended from those expressions of *Omoi* are shown in Chapter 6.

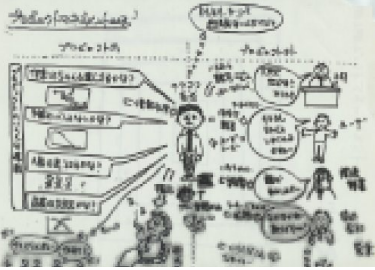
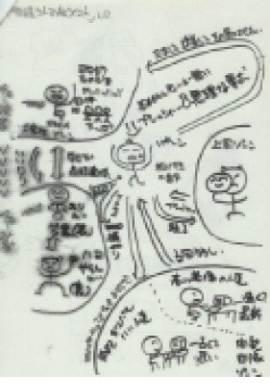
*Table1: four stages of Omoi with the permeating process of PMBOK (2009)*

stage of SEs <i>Omoi</i> in its transition (stage of situation of the workplace)	time	Permeating process of PMBOK
Stage-1	8 years ago	before introducing PMBOK
Stage-2	6 years ago	starting to introduce PMBOK into existing PM from the level of an executive
Stage-3	5 years ago	beginning to be used and understood PMBOK by project members in the workplace
Stage-4	3 years ago	many SEs handle PMBOK and PMBOK is used as a standard of the project organization

**5.1 Stage1:** Expression of RP-1, 2, and RD-1, 2

“In personally predicament” expressed in RP-1 and 2, and “communicate straightforwardly and outspokenly” expressed in RD-1, and “to keep adjusting all matters” and “act friendly to everybody so that I am not disliked” in RD-2 tell us that SE bears heavy encumbrance personally and it is easily assumed that SE is feeling difficulties in having continuous smooth communication while dealing with parties concerned. Also, we can see that a lot of wide-ranging business is tasked on one SE.

Table2: Rich Picture (RP) and Root Definition (RD) of Stage1 of Omoi

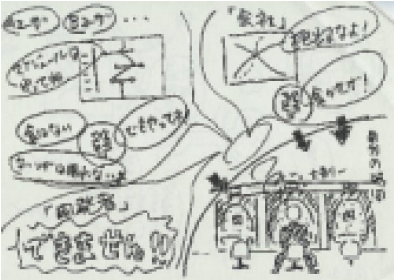
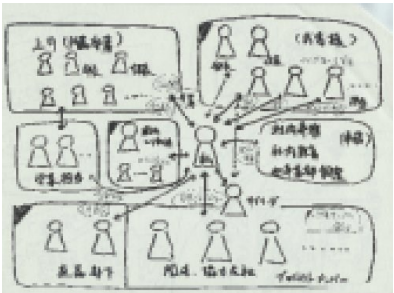
RP	RD
<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p>RP-1</p> </div> <div style="text-align: center;">  <p>RP-2</p> </div> </div>	<p>&lt;RD-1&gt;</p> <p>X: A system to keep adjusting all matters</p> <p>Y: By means of utilizing skills, experiences, networks of human resources and making formal and informal communication</p> <p>Z: In order to make both parties' satisfactions</p> <p>&lt;RD-2&gt;</p> <p>X: A system that eases each worker</p> <p>Y: By means of acting friendly to everybody so that I am not disliked, and giving them motivation</p> <p>Z: To spend life in which home and work are well balanced</p>

5.2 Stage2: Expression of RP-3, 4, and RD-3, 4

From RP-3 that clearly shows “boundary between project and individual” and from “participating in the project in conformity with my style” in RD-3 we see that SE definitely thinks that the good relation between the project and the individual is necessary as well as balance of the relation. Also expressions of RP-4 “bilateral dialog of individual and parties concerned” and expression of RD-4 “A system that ensures promises are kept for everyone” tell us that SE considers that collaboration and cooperation of parties concerned are required for the project.

From these two issues, we may understand that situations of the PM are changing, and the project range and its advancement are becoming clarified to other workers.

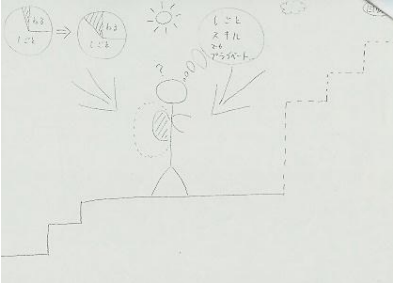
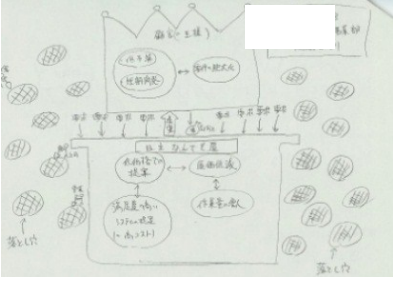
Table3: Rich Picture (RP) and Root Definition (RD) of Stage2 of Omoi

RP	RD
 <p style="text-align: right;">RP-3</p>	<p>&lt;RD-3&gt;                      X: A System which enables everyone’s participation                      Y: By means of participating in the project in conformity with my style and by demonstrating my ability                      Z: In order to live happy life always feeling contented</p>
 <p style="text-align: right;">RP-4</p>	<p>&lt;RD-4&gt;                      X: A system that ensures promises are kept for everyone                      Y: By means of acting good as everyone consents and work suitably                      Z: In order that all will become happy</p>

### 5.3 Stage3: Expression of RP-5, 6, and RD-5, 6

Expression of RP-5 “stairs to improve skills” and RD-5 “nurturing project members to work with full power so that not only the business goals are accomplished but also each person can reach to own goal, in order that the organization and project members keep on maturing” tell us that SE at the actual business site have a strong desire in interconnecting workers’ maturity with the growth of the organization. Further, we understand that SE feels it is mandatory to complete assigned business from the expression of RP-6 “satisfy demands of customers”, and RD-6 “helps to accomplish an assigned project whatever happens”.

Table4: Rich Picture (RP) and Root Definition (RD) of Stage3 of Omoi

RP	RD
 <p style="text-align: center;">RP-5</p>	<p>&lt;RD-5&gt;</p> <p>X: A system that enables individuals to obtain satisfaction</p> <p>Y: By using of nurturing project members to work with full power so that not only the business goals are accomplished but also each person can reach to own goal</p> <p>Z: In order that the organization and project members keep on maturing</p> <p>&lt;RD-6&gt;</p> <p>X: A system that helps to accomplish an assigned project whatever happens</p> <p>Y: By means of tackling a difficult problem that blocks one after another, and solving it</p> <p>Z: In order to make the established mutual trust stronger</p>
 <p style="text-align: center;">RP-6</p>	

## 6. Comprehending the situations of the PM and evaluating the transition process of them

The actual situation of the PM which was comprehended by using leaning from SEs *Omoi* expressed on *Omoi* Model (RP and RD) is shown in Table5. We can evaluate the improvement of the PM by tracing the transition process of SEs *Omoi*.

## 7. Conclusion

This paper showed the “actual” situation of organizational improvement which was comprehended by tracing *Omoi* (“actuality”) using *Omoi* Model, while it could not be grasped in an evaluation from the outside using objective criteria (such as production costs or the number of quality defects). And proper evaluations need to be based on approaches that deal with *Omoi*.

Table5: learning from SEs Omoi expressed on Omoi Model (RP and RD) and the situation of PM in each stage

stage of SEs Omoi in its transition (stage of situation of the workplace)	learning from SEs Omoi expressed on Omoi Model (RP and RD)	the situation of PM
Stage1	(i) Individual SE bore a heavy load. (ii) Communications in order to maintain interpersonal relationship among project members was important but very difficult.	SE had not the shared guideline of PM and depended on an own experienced knowledge
Stage2	(iii) Each SE felt the difference between the existing management style based on an own experience and the guideline of PMBOK. (iv) Collaboration and cooperation among SEs had to be done with rules and decisions according to PMBOK.	There was the friction between the style based on individual experience and the guideline of PMBOK, and SEs managed its friction
Stage3	(v) The subject was shifted from solving a problem inside project to satisfying customer needs and accomplishing the project. (vi) Management of relation between organization and individuals was required, considering cope with both accomplishment of project and a growth of individual abilities.	It was compatible in the individual target and the target of a project based on PMBOK

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## Contact details:

### Satoshi Suzuki

Japan Association of Action Reserch, Tokyo, Japan

[icj53012@nifty.com](mailto:icj53012@nifty.com)

## **Preliminary discussion of Validity and Legitimacy of SSM-based AR**

*Ken Uchiyama  
Daito Bunka University  
Tokyo, Japan*

The problem of validity and legitimacy of AR is controversial. I will show a solution to this problem by introducing the concept of recoverability of “actuality” as opposed to repeatability of “reality” in positivism. At the same time I will also suggest guidelines for writing an AR academic paper.

The validity of research is commonly understood to be constituted from the validity of the knowledge obtained by the validity of the methodological process to procure the knowledge. In the positivism, the researcher sets an hypothesis (model of “reality”) in a pure “reality” void of “actuality”, verifies whether the model accords “reality”, then if verified, the model (hypothesis) becomes part of in the data-base of scientific knowledge. In these terms, the standard for the validity of knowledge becomes objectivity and universality (independent on who, when and where). In other words, in positivism “actuality” is take out from the process when formulating the model and verifying the model in order to be able to achieve the standard of objectivity and universality. In this case, the answer of the verification can be only yes or no (truth or false).

In positivism there is the strong assumption that a unique truth exists in the real world and it can be verified. Because, if not, such a methodology principally becomes nonsense. Bhasker, who claims critical realism, denies assumptions at the experienced level, but rather sees the mechanism, power and tendency namely the reality in his sense as the truth. It is sense of reality that underlies immediate experience as a latent existence (Bhasker 1989 in Winter and Giddings 2001, p.261). It could be said that Bhasker, in a sense, criticizes the methodological validity of positivism, that is, positivism try to verify the apparent truth at the experience level by the methods of scientific experimentation. Critical realism asserts that while we have no option but to assume the existence of objective reality, our knowledge of it is destined to be forever ‘fallible’ (Collier, 1994, p.16,50 in Winter and Giddings 2001, p.259) Thus, Winter and Giddings (2001, p.263) note that although critical realism is a model for inquiry in general, it also seems to be generally compatible with the values and processes of action research. They place action research as an inquiry process to understand the existent reality such as mechanism, power and tendency which are latently beneath our experienced world. However their claim also enter into the point that the standard of the validity of the

knowledge is objectivity and universality of the existent reality as long as they accept the existence of the unique truth even in the latent level.

In the case of SSM-based AR, our standpoint is that we do not know whether there is the system (mechanism) in the real world or not even in the latent level, but we can embody 'systems' in the process ("actuality" in Kimura's sense) to inquiry of the life world. Therefore, we do not think about the repeatability in the "reality" level based on objectivity and universality as the standard of validity of knowledge in AR. We make a question of validity in the process of 'learning by doing' or 'experiencing' which belongs to "actuality" in Kimura's sense, which is completely different from Bhasker's sense of actuality that means events. In other words, the problem of validity is the question of how to connect the experiencing ("actuality") and the knowledge ("reality") obtained by it, and the relationship between them. As the source of learning is an auto-affection at the "actuality" level in our context, the standard of validity of the research as methodology is that we can discuss publicity, that is, when, where and how we can obtain learning based on auto-affection in the process of research. For this purpose, the process to obtain learning in AR have to be able to be recoverable. It is a model that expresses "actuality", that is the means of the recoverability. We can make the process of AR, which is principally unable to be repeated, recoverable, tracing it by means of the models or "accomo-points (points of accommodation)" which are accommodated by the participants of SSM. Fig. 1 Reporting the SSM-based AR.

In summary, the researcher makes sense of the process of AR and public by presentation of this learning in order to recover the "actuality" of AR, composing a narrative through the "accomo-points" as plots (Fig.1). Consequently, in AR we can reserve for the public level open discussion and share the experienced knowledge among people who attend the presentation, in contrast to positivism which attempts to objectivity and universality. In other words, AR radically questions the validity of the process itself ("actuality"), while positivism questions the knowledge itself ("reality"). It could be said that the question of validity in AR is based on recoverability, which can be replaced for repeatability of "actuality", while in positivism it based on repeatability of "reality".

Thus, the legitimacy of AR is rooted in "accommodation" which means in a sense "common sense" (based on Alistoterian Koine aisthesis) in the actuality level among people (Aida in Japanese), while in contrast to that of positivism and critical realism which is rooted in the existence of the unique truth. In other words, there is the difference of die letzte Instanz of the

legitimacy in research which ultimately leads to obtaining to the “truth of God” or approached in a different way is about “common sense” among people (Aida). People as someone see the situation as something (Hiromatsu, 1991, p.74). In the process of SSM discussion, participants claim their views about the situation as something, as it were, namely relativism. But as doing so, when they can find an accommodation without “as someone” or beyond individuals, it seems to them that they get over the relativism. At that moment, we can touch “actuality”, at the same time, an accommodation based on commonsense comes out. I would like to add that this corresponds to Vico’s methodology (Vico, 1990) which is strongly against Descartes’ rational knowledge critica and claimed topica which was the common sense based knowledge. It seems to me in our context that Vico asserted “actualism”, while Descartes claimed “realism”.

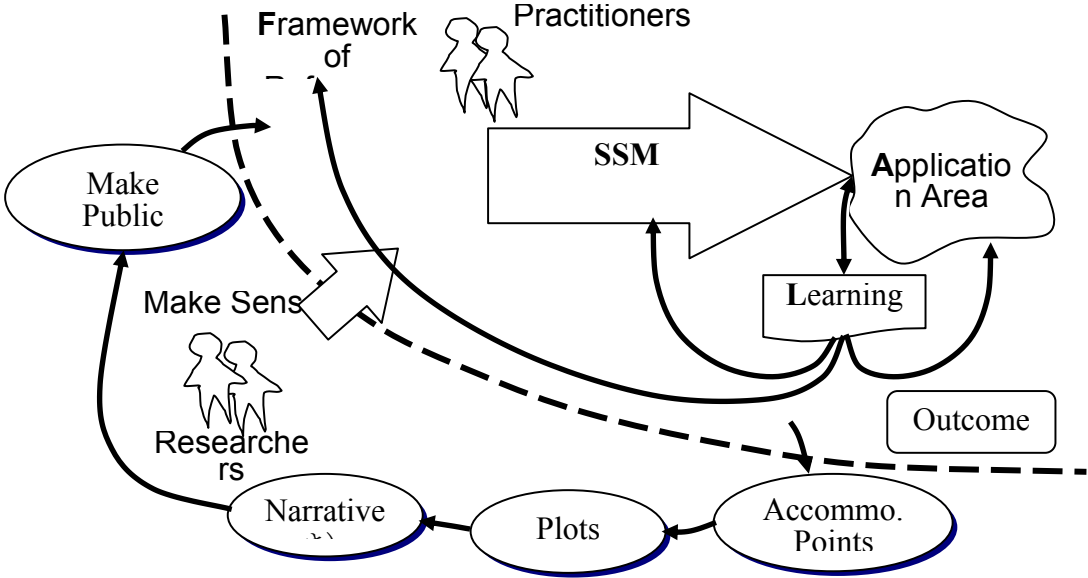


Fig.1 Reporting the SSM based AR

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### ***Contact details:***

**Ken Uchiyama** Daito Bunka University, Tokyo, Japan

# Teaching Action Research in an Award-Bearing In-service Programme in Austria: A Retrospective Evaluation.

Katharina Soukup-Altrichter und Herbert Altrichter, University of Education Linz and Johannes Kepler University Linz, Austria

## Context

Action research has obtained a comparatively high profile in the Austrian education system as a strategy for promoting school reform, for in-service training of teachers and for building networks of innovation. One of the earliest formats which helped to familiarize the Austrian teaching force with the concepts of action research was the teacher in-service education (INSET) programme “Paedagogik und Fachdidaktik für Lehrer/innen” (PFL; which translates as “pedagogy and subject matter teaching for teachers”; see Altrichter 1986). Over the years some new elements have been introduced into the original concept (see Krainer & Posch 1996) and there have also been adaptations for new tasks (as e.g. for establishing networks introducing new teaching methods; see Wittwer et al. 2004), however, the basic structure has proved astonishingly resilient while being adaptable to changing needs and circumstances of innovation (see Altrichter & Posch 1998).

The overall *aim* of the INSET-programme is to stimulate participants to develop their practice and their professionalism. This is done not by making teachers “receiving knowledge” but by developing situations in which they are stimulated and supported to “construct and reconstruct their knowledge” by reflecting and developing situations and actions from their everyday practice in schools and classrooms. Thus, learning takes place in an action research mode (see Altrichter et al. 2008). It starts from the practical experiences and questions of teachers and goes on to reflect it from different angles and perspectives, and by using a “professional community” of teachers also for developing new action ideas which, in turn, will be put into practice, documented and evaluated.

In 2001 we started a new version of PFL-courses which was to focus on primary school teaching and integration/inclusion of children with special needs. Its *basic structure* reflected the PFL-strategy: Since learning and developing your classrooms takes time, the programme is scheduled for two years. It starts about the beginning of a new school year with a five-day

seminar. A second seminar takes place about one year later during the summer vacation, the third seminar is scheduled at the end of the second school year. The three seminars provide some information with respect to primary didactics, integration/inclusion for children with special needs and to classroom development by action research. However, much time is devoted to reflect one's own classroom practice, to formulate questions for reflection and ideas for development and to sketch a development project for one's own classroom and to discuss it with empathic colleagues.

Between the seminars smaller groups of participants (five to ten participants) meet regularly in *regional groups* in order to discuss and support their *research and development projects*, which are the core learning element of this programme. Teachers are supposed to prepare two *action research studies* throughout the two-year programme. These studies are supported by the regional groups which are modelled according to the idea of a professional community rarely existing in Austrian schools. The development of new action ideas, the analysis of critical incidences, feedback, support with research tasks as e.g. conducting interviews, observing classroom teaching etc. are tasks these groups deal with collaboratively. Experienced action researchers act as group moderator and support the teachers' research processes and their discussion in their small "professional community".

During the programme it was frequently visible that this learning setting triggers processes of reflection and development in classrooms and schools on the participants' part. The meetings of the regional group and of the seminars contributed to some continuity in the development work and helped to overcome the hard times in a teacher's year. Thus, the very structure and tasks of the programme took care that the INSET-programme had some impact in teacher's classrooms.

### **Research question and research design**

Given our experience as course leaders and according to prior evaluation studies we were quite sure that personal development and classroom development takes place *during* the two-year course of the PFL-programme. But what does happen *afterwards*? Do participants feel that there are some lasting effects on their teaching and the way they conceive their role? Do they even continue their development work? Or is it difficult to uphold a reflective and developing stance without the support structure of the programme? In order to get some insight in possible answers to these questions we decided to investigate these questions in a

very open approach. We took one “regional group” from the second run of the PFL which took place from 2004 to 2006. This regional group consisted of seven persons which amounted to about a quarter of the programme’s participant numbers. Three years after the end of the programme all members of this regional group were invited to a reunion. Five members participated in a group interview, which was initiated by a very broad impulse reflecting the questions above. The sixth participant was interviewed in an individual interview because her time constraints didn’t allow attending the group discussion. Data was analysed by “thematic coding”. The main themes which emerged are presented in the following paragraphs.

### **Participants’ overall retrospective evaluation of the programme - benefits and outcomes**

The overall evaluations of the participants of the working group were very positive and even emotional. A positive affective atmosphere which is primarily built up on regional group level is one of the attractive factors of the programme which also contributes to overcome periods of strain and difficulty in the course of a school year and in the course of their development projects. We detected four fields of learning experiences which are represented here by very short excerpts from the data.

#### ***1. Analysis of critical situations by confronting different perspectives***

All interviewees consider it as one of the main gains that they are able to analyse practical situations from a critical distance. Some are using a *teaching journal* until today. “More than before I take that there are different points of view and I profit from it. I do not see myself standing in the centre all the time, but I move a little out of it and I can observe it” (M6).

Helen<sup>3</sup>, an experienced school principal, reports: To have a personal journal has “become a custom at our school, and I think this is great”. Journals give a good background material also in tricky situations and as a basis for conversations with parents (H4).

#### ***2. School Development***

Helen has also extracted many ideas and tools for initiating and reflecting processes of school development from the programme (H4). Through the project work in the programme she and, similarly, Gina have learned to formulate project proposals, evaluation reports and project documentations in a clearer and more convincing way which help them to win some prizes in school-related competitions. Gina whose principal initially was against her and her colleague’s participation in the programme (the two members of staff took unpaid leave in

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<sup>3</sup> Names are changed in order to [anonymize](#) participants.

order to participate), reports that her school principal in the meantime has acknowledged that the whole school profits from their course participation.

However, some frustrations are reported, too: Max's enthusiasm to introduce new ideas is frequently dampened by his colleagues who seem to smile at him: "He has studied at the university and now he wants to turn everything upside down." He wouldn't have had this experience without the programme, on the other hand it is a gain that he has widened his perspectives which seems to distinguish him from some colleagues (M6).

### ***3. Collaborative evaluation with students***

Helen explains that she regularly evaluates the innovations introduced at her school. Often she does this collaboratively with students. "This is a wonderful work with children and they like to do it very much" (H18).

### ***4. Personal development***

Mary thinks she has learned to cope with her professional challenges more consistently and with a longer time perspective: "It is more difficult to distract me from the resolving problems that arise." (Ma5). Gina feels that she can "act more professionally in her job". The most important effect of the programme was to improve her self-confidence which also has a positive effect on her interaction with colleagues. But she has also learned to lead groups, e.g. she was asked to lead a difficult staff meeting and she has initiated and organised a staff development day (G6).

Her research and development project has made Ella aware how important her own personal condition is for classroom teaching. She takes care that she enters the classroom in good personal condition, "not just in a good pedagogical condition, but in a real good condition. (...) I am happy if I experience things with my classroom kids which I have not expected. (...) I take care that we work in good spirits, and I leave space for it." (E7)

## **Concluding interpretation**

### **Reflection and writing**

The goal of the programme is to develop one's own practice by the help of shared analysis. All interviewees experience these cycles of action and reflection as fruitful for their own development and cherished their shared processes of reflection and development. During the programme one of the authors who acted as leader of the regional group under research here, experienced the exchanges in the regional group as extremely challenging and fruitful, while

the writing up of the results seemed to be as a rather difficult and straining task which many participants only decided to undergo in order to acquire the certificate. Thus, it was surprising, that at least three participants continued to reflect the experiences in written form, be it in form of journal writing or in order to document and evaluate school development projects. Once having coped with the tortures of writing may have also provided the experience that writing up helps to see some issues more clearly than before, that documented observations are a worthwhile base for various conversations, and that well-done project documentation also helps to attract public appreciation, e.g. when there are school competitions.

### **The power of the group – professional community**

With three-year hindsight, participants do not seem to remember specific contents or concepts which had been introduced by the programme, but rather

- the challenging and supporting spirit of the group and
- a general stance and way of dealing with the challenges of classroom teaching and school development, in particular by reflecting, gradually developing and evaluating the experiences for new cycles of development.

A major factor for success is – in the eyes of the interviewees – their “dear” group. The reunion of the group after three years give some indication for Lave and Wenger’s (1991) view that the development of practitioners’ knowledge and competence is not an individual process, but a process embedded in the vibrating interactions of a community of practice (see Altrichter 2005). The development of teachers’ identity is stimulated by a community which asks for the individual’s experiences, challenges and appreciates them and, thus, attaches social meaning to them. This is an experience the interviewees frequently point to; it is interesting to see that they seem to long for the establishment of such communities at their own schools.

### **Conditions for innovation**

Strittmatter (2001) claimed that for successful implementation of educational innovations a productive interaction of motives of “must”, “will” and “can” is necessary. Applied to our programme, the “must” is represented by the obligation to pursue, document and evaluate a developmental project in one’s classroom or school and to document it in a case study. The interviews indicate that this “must” was exerting some unpleasant pressure on many participants, however, also helped some of them to keep on track. That there is some “will” to develop oneself and one’s practice may be taken for granted; otherwise participants wouldn’t

have enrolled for such a voluntary programme. The “can”, the support for developing their projects and putting them into practice and for professionally coping with the challenges in its course, is represented by the structure of the programme and, obviously very importantly, by the supportive structure of the regional group. For two years the programme establishes conditions which support development in schools. In some cases the programme substitutes pressure and support for developmental work which is not in place in schools: The programme asks for development work and offers professional support. The long-term hope is that schools are increasingly prepared to establish such a support structure of their own in order to help participants to continue with their development work.

How is this reflected in our data? Two of the participants are headpersons of schools who are responsible for setting appropriate conditions for school development. Both of them are still continuing this kind of work in her school. One who works in a small school and is already an experienced headmistress looks for further challenges, because she thinks that she achieved what was possible to achieve in her small school. Nevertheless both of them were able to build up conditions for school development, and did so – more or less successfully. Another two teachers who came from the same school seem to interpret the conditions for school development in a different way: Gina gets the chance to lead a difficult staff meeting and recognises that the principal of the school meanwhile acknowledges that the whole school profits from their course participation. Therefore Gina confidently looks forward to trying out new ideas. Max continues his efforts to student-centred classroom teaching (which he started during the PFL-Programme) but for further development he wishes to change to another school.

At last Ella: As part of her second PFL-action research study she pushed forward with a development programme for her school which was considered rather successful. Some of the results can still be seen, but no further steps of development were taken, because the school's headperson did not want to embark on further development, and Ella, as a “normal” teacher, did not have any authority to initiate new initiatives. This might also be a reason for her wish to look for another job in which she can use what she has learnt.

Obviously, the PFL provides some conducive conditions for school development which participants' schools may use as long as the programme lasts. Afterwards schools would have to create themselves basic conditions for school development, otherwise dynamic teachers will finally look for other fields to find satisfying working conditions.

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## **Contact details:**

**Katharina Soukup-Altrichter**

University of Education, Linz, Austria

[katharina.soukup-altrichter@ph-ooe.at](mailto:katharina.soukup-altrichter@ph-ooe.at)



## ***Action Research for Secondary Mathematics through History and Culture***

Ioanna Georgiou, Peter Johnston-Wilder

Institute of Education

University of Warwick

### ***Abstract***

This paper describes an Action Research project run with a group of 16-17 year old underachieving students. The group was taught a one-year course of mathematics through history and culture. The change attempted was to increase students' motivation and achievement in mathematics. Unfamiliar forms of knowledge and practices were employed and the students found their perceptions being challenged. Their reactions were varied. Repeated adjustments were made during the year, creating several "planning-acting-observing-reflecting" cycles.

### ***Introduction***

The context of the study is a private, English-speaking school in Cyprus which initiated a special studies programme to address the academic needs of 13 students (aged 16-17 years). The group had previously had negative experiences with mathematics, including achieving very low results in IGCSE. This same group of students also demonstrated low attainment in other areas of the curriculum. After meetings and discussions about the specific skills and needs of the students, a decision was made that part of their 6th form programme would include a course on Cultural Mathematics. The aim of this Cultural Mathematics course was to *teach mathematics through history and culture*. The academic committee of the school welcomed the idea and fully endorsed it. Ethical approval was sought and the principal of the school agreed for this Action Research project to run. During the course, the focus was on motivating the students and improving their achievement. What follows is a brief discussion of teaching mathematics through history and culture, and of the main Action Research principles adopted in the study. The research project is described extensively. This is followed by a discussion of the changes brought about by introducing the Cultural Mathematics course; finally some conclusions are presented.

### ***2. Setting the scene***

Cultural mathematics, ethnomathematics and the history of mathematics are all approaches to mathematics lessons currently in restricted use. In spite of the lack of existing curricula for

working with a multicultural approach, research literature is growing. Many researchers and educators believe that mathematics can become more approachable for students through study of its history and the various cultures which have used it (Abraham and Bibby (1988), Ascher and D' Ambrosio (1994), Bell and Cornelius (1988), Bishop (1991, 2001), Borba (1990), Cotton (2001), Furinghetti (2000), Gerdes (1994), Grughetti (2000), Katz (1993), Masinkila and King (1997), Nelson (1993), Shan and Bailey (1991), Zaslavsky (1996), and many more).

These authors believe that the multicultural and historical approach to mathematics may help students to understand where mathematics comes from, to appreciate the contribution of various peoples and cultures to the development of mathematics, to acknowledge the utility of mathematical tools and to see that mathematics has its roots in everyday needs, for example, of people cultivating plots of land, trading produce, trying to understand movements of celestial bodies, facilitating complex calculations, leading to development of increasingly advanced mathematical tools.

In order to study the impact such a multicultural and historical approach would have on students, Action Research was used. Action Research is a methodology not just about surveying and analysing the world, but also about trying to change it (Gray, 2004). McNiff (1988) suggests that Action Research suits the needs of teachers working inside living systems, where situations are never static, and that it helps the teachers to organise and progress their ideas. For Stringer (1999), Action Research is also about both collaboration between the participants and the researcher, and also how to resolve specific problems through systematic action designed to change practice. Green (1999) asserts that, in educational settings, Action Research results are not intended to be generalised, but rather to describe the uniqueness of particular learning situations and to allow that uniqueness to be recognised and appreciated as such.

Action Research follows a cyclical process. Stringer (1999) describes a “Look-Think-Act” interacting spiral, while Lewin uses “Planning-Acting-Observing-Reflecting” to describe the cycles. In both cases, the stages are overlapping and contribute to one another. Kemmis and McTaggart (1992, in Cohen et al., 2000) understand Lewin’s four acts as acts of everyday life; however, in Action Research these acts are executed more carefully, systematically and rigorously. Armstrong and Moore (2004) understand Action Research as a cyclical process of collaborative planning, intervening, and evaluating the impact of the intervention. In this paper, we adopt Lewin’s description.

### ***3. On the evolution of the research project***

One situation in which Action Research is particularly powerful is when practitioners initiate curriculum change to achieve positive outcomes for the learners (McKernan, 1991). The students who participated in this research had displayed serious disengagement and difficulties with mathematics and other lessons. Their academic weaknesses led the school to devise a new programme tailored specifically to the students' needs. The aim was for the students to graduate from the secondary school with some basic skills.

Koshy (2005) argues that improvement in educational practice can be achieved via Action Research. During the course of the Cultural Mathematics course, not only the curriculum underwent reform, but also the teaching approach; the approach became more flexible in terms of giving the students voice in the second half of the year.

At the start of the course, letters were sent to relevant parents, inviting them to consent to their child participating in the project. Students maintained the right to withdraw from participation in interviews or questionnaires, but not from the lessons. No student declined to answer a questionnaire or refused to answer any oral questions addressed to him<sup>4</sup>. Field notes were kept throughout the year. The teacher-researcher (T/R) recorded data from the lessons, distributed four questionnaires and conducted three interviews with students and one with their previous teacher.

A substantial and innovative set of student materials was prepared by the T/R before the start of the course. These materials are described as innovative because, in them, concepts are examined more deeply than in the standard mathematics text used in Cyprus, drawing upon a wide range of published resources, such as Katz, (1993), Sesiano (2000), Wesley (1993), Wright (1999), *NCTM* (1969,1989), Eagle (1995), Lumpkin and Strong (1995). The basis for these materials was the core tier syllabus for year 5 (16-17 years) in Greek-Cypriot public schools. Each chapter of the standard mathematics text was re-written, approaching each concept through its historical development or through cultural or other practices. The design of the material is described in Georgiou (2008). Constant feedback from the students prompted changes during the year.

The cyclical nature of the present study will be analysed here using Lewin's (1946) 4-stage

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<sup>4</sup>All students will be referred to as "he" due to the vast majority of the participants being males (12 boys to 1 girl overall)

model of “Planning-Acting-Observing-Reflecting” (in Adelman, 1993). The whole year can be viewed as one big cycle with sub-cycles. At the level of the whole year, the ‘planning’ stage involved discussions with the academic committee of the school and feedback from colleagues; the ‘acting’ stage involved the totality of the lessons and the students’ work; the ‘observing’ stage refers to writing the journal and collecting evidence throughout the year; the ‘reflecting’ stage is an overall consideration of the whole year, what went well and what did not, so that one could repeat a similar cycle more successfully.

The year can also be seen as consisting of smaller sub-cycles, perhaps looking at the work of the students over a single term, or at the students’ interactions with the contents of a single chapter or a topic within a chapter. The ‘planning’ in each case involved decisions on the curriculum taught and what adjustments were made, before ‘acting’. The ‘observing’ stage involved data gathering, including questionnaires, quizzes, tests, extended assignments, presentations, interviews, informal discussions and journal keeping on behalf of the T/R. In the ‘reflection’ stage the T/R monitored and guided the project towards a desired outcome (McNiff and Whitehead, 2005).

Koshy (2005) suggests that questionnaires are especially useful at the beginning of a project when initial stances are captured or on subsequent occasions, using either closed or open-ended questions. In this study, four questionnaires were used to collect information about the students’ perceptions about mathematics in general, how they felt about mathematics as taught in Cultural Mathematics lessons, which parts they enjoyed, which parts were hard or too easy, tedious or engrossing. The questions used in each questionnaire focussed upon issues raised in class. Although, the constraints of the strict school schedule did not allow much time for interviews, four interviews took place: one with the previous teacher and three with students.

A significant source of data was the teacher’s assessment of the students, including tests, assignments, presentations and participation in class. McNiff, Lomax and Whitehead (2003) describe this kind of data as “fingerprints”, requiring detailed scrutiny. The methods of assessment were agreed as a part of the school’s new policy for the programme but specific aspects, such as the topics of focus for students’ assignments, were designed by the teacher as the course evolved.

The T/R monitored regularly the impact of the new course upon the students: whether the students enjoyed their lessons, whether they learned in each lesson and, if they were happy

with the material covered, whether they found a purpose in it. When all these aspects were considered, decisions were taken about modifying the materials for the next chapter.

Observation of the students working sometimes provided a stimulus for a sub-cycle of reflection and revised planning. One example of this was that the teacher taught only the first half of the trigonometry chapter; although the students seemed to enjoy facts from astronomy and some initial discussion and exercises on trigonometry, the later work on the sine and cosine rules was found by students to be too demanding and the students were observed to become disenchanted. A decision was then made to move to a new chapter.

Reflection and change in the project did not progress sequentially through each stage; the action research cycles of improvement and incremental change often arose from issues covered during instruction on a chapter, while students were still working on an assignment for a previous chapter.

The observed changes in the students were sometimes significant and often unexpected.

One case occurred at the beginning of the school year. When the students were first presented with a page of written text in a mathematics lesson, they objected, although the text *was* about mathematics and about how the various aspects of mathematics contribute to our well-being and comfort. The students complained that they were being required to “do English and not maths” and that the text was tedious. Two and a half months later, students were presented with another text, an extract from a transcribed university lecture about how mathematicians can become millionaires; the students paid attention and worked at understanding the text, and they were willing to make comments and participate in discussion. The central idea of the text was mathematical problems that have not yet been solved; the potential solver would receive one million dollars for each. This example may suggest that students’ responses to the expectations of the course improved as they became more familiar with the expectations. However, it may also be the case that the context of the later text was more engaging of the students’ interest than that of the earlier text had been.

Another change arose during an interview with a student. During this interview, an idea emerged regarding a project. The student expressed concerns regarding “the sort of maths we would need after graduation”, and out of this suggestion emerged the assignment in which the students were each required to interview three professionals about the mathematics they use in their workplace. This assignment was very successful; the students produced a valuable

piece of work, and some students came up with a number of interesting findings, including uses of mathematics from their own workplace (some of the students were holding part-time jobs).

The detailed journal, kept by the T/R throughout the study, provided a full and systematic account of the unfolding project. One of the most significant findings was that students' interest, motivation and achievement were increased by activities relating to current social issues. The use of purely historical activities occasionally provoked negative responses and low levels of participation, with certain variations, such as the background theory to Pythagoras' theorem. Evidence for these findings came from the researcher's journal, students' worksheets and test results. For example, when working on a topic relating to population growth and the work of Malthus, the students were eager to participate. Students seemed to be disengaged or even frustrated when they perceived the work assigned to them as too difficult. The disengagement was evident when dealing with sine and cosine rules, although they had enjoyed the first part of the trigonometry chapter.

#### ***4. Discussion***

The Action Research project described here attempted to develop both the students' mathematical knowledge and the students' awareness of mathematics in modern culture. Balias (2006) suggests that school constitutes a mechanism that selectively reproduces culture through negotiation, evaluation and interpretation. Within the educational context, the reproduction of culture is oriented towards conveying pre-specified knowledge, including habits and customs: knowledge that is socially acceptable as common, conveyable and collectively remembered. It is collective memory that was perhaps significantly challenged in this project. The material taught went significantly beyond what is commonly taught in school. An example is the historical episode in which the Pythagoreans' view of mathematics was profoundly shaken by the discovery of irrational numbers and, according to the myth, led to the murder of Ippasus. Another example is when Thomas Malthus predicted that the population would increase far more rapidly than food production. In each example, the expert scientific view of the day was shown to be inadequate, something that is rarely presented at school. Furthermore, the introduction of democratic practices and procedures into mathematics lessons, such as valuing the students' questions and contributions, and allowing students to access their notes in tests, challenged the students' preconceptions. Students encountered forms of knowledge and practices with which they were completely unfamiliar.

As heterogenic culture is a characteristic of schools, the challenge is to develop new ways of functioning to serve the needs of diverse groups (Magos, 2006). The Cultural Mathematics course was undertaken by students coming from different backgrounds. Kourti and Katoulli (1999, in Magos 2006) describe teachers trying to “not allow” students to bring practices from their own culture into school, including mathematical practices, as community mathematical practices can be very different from the ones taught at school (Moreira, 2006). This approach is in contrast with multicultural and antiracist education (Shan and Bailey, 1991). *Intercultural Education* has been defined by the EU council as a new form of education that relies upon interaction, exchange, reciprocity, mutual support, respect of values, acknowledgement of different representations, symbols, appreciation of the greatness of each difference and variety. The material developed in this project serves the purposes of *Intercultural Education*, and enabled the students to appreciate and value mathematical and other intellectual ideas that originated in earlier times and in other cultures. The lessons involved themes such as the mathematics of ancient peoples, the use of trigonometry to observe the movements of the celestial bodies, the use of sequences to describe social circumstances and the use of finger notation to communicate numbers in specific cultural settings.

## **5. Conclusion**

Prior to participation in this Action Research project, the students had experienced mathematics negatively and unsuccessfully. In this project, history and culture were used to complement and boost a curriculum built for mathematically weak students. In general, students enjoyed discussions connecting mathematics with social issues. They were also intrigued by cases where the leading minds of an era were challenged, or even forced to crime in order to save a certain (mathematical) belief.

Students experienced mathematics from a different point of view and responded in many different ways. It seems highly unlikely that such an opportunity for a whole year course would emerge again. Nevertheless future research could involve the teaching of parts of the curriculum. Students will then not just be equipped with the mathematical tools, but also informed about their uses and the reasons for their existence.

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**Contact details:**

**Ioanna Georgiou**

Institute of Education, University of Warwick,

[I.Georgiou@warwick.ac.uk](mailto:I.Georgiou@warwick.ac.uk)

**Peter Johnston-Wilder**

Institute of Education, University of Warwick,

[P.J.Johnston-Wilder@warwick.ac.uk](mailto:P.J.Johnston-Wilder@warwick.ac.uk)

# **The Portfolio: An instrument for change and development in the nursery school**

C. Tsaoula, T. Sidiropoulou, M. Poumbrou, N. Karakoulidou

## **Introduction**

Action Research is a form of self-reflective inquiry adopted by the participants in social situations so that they can improve a) the rationality and fairness of their own practices b) their own understanding of the practices and c) the situations where these practices are applied (Carr & Kemmis, 2002).

The sequence of action and self-reflection in a spiral, recurrent movement (Elliot, 1991, Altrichter, 2001, Bagakis, 2002) designates that, so much the solution of a problem and its understanding, as well as the conscious adoption of an active attitude relative to the issues of professional routine cannot be implemented through an occasional adoption of the suggested logic but rather through its systematically supported establishment.

In the field of education and training in Greece and internationally (Katsarou & Tsafos, 2003), action research is used widely in programmes of educational life- improvement, such as syllabuses, relationships, development of educational policy systems, critical research of the relationship between school culture and educational development of teachers, etc. (Day, 2003).

Training and research programmes within a network particularly rely on the symmetric and systematic involvement of the participating researchers, practitioners and academics who are trying – through action research- to find sufficient justification for the situation they have experienced and –thus- form a “theory”.

It should be noted that in the relevant international literature, many researchers attribute to the action researcher the role of the trainer, considering that the researcher is the one that imports the person to the research, which allows him to combine his intervention with an aspect of verification of the research conclusions (Gogou-Kritikou, 1995).

## FRAMEWORK OF IMPLEMENTATION

Accordingly, in the Department of Early Childhood Education of the Higher Technological Educational Institute (TEI) of Athens, whose aim is the scientific training of educators who will assume the education and care of children aged 0-5 years within a nursery school, as members of the faculty, we formed a team and worked out a framework of research experimentation. Thereby, we planned and implemented a 2-year research programme, “Thalis, in cooperation with students and accredited practitioners in the field of early childhood education and care. In regard to the methodology, we chose action research, which requires the development of negotiatory relationships among colleagues and participant researchers (Gogou-Kritikou, 1989). Amongst them, relationships of cooperation and inter-training were established; the researcher learning from the colleagues’ experience, and the colleagues learning methodologies and techniques from the researcher.

The content of the research project provided for parallel cooperation with specialized scientific museum personnel (departments of educational programmes) in the context of which there was systematic museum-pedagogic experimentation both for the practitioners and the students of the TEI. The criteria for the selection of the art spaces/educational programmes had been the availability of the infra-structure that would make the use of the experiential approach of learning possible; the Museum of Cycladic Art and the Collection of Modern Greek Art (Emfietzoglou) filled our criteria.

The general aim of the intervention/programme was the exploration of the interaction between the academic community and educational institutions (in this case, nursery schools) using new psycho-pedagogic and teaching approaches. The particular objective of our intervention was the use of a tool, the e-portfolio of the practitioner (an electronic file of personal achievements), (Rivard, 2005) as a medium of professional development of the active practitioner as well as of the future educator within the nursery school. We feel that using new technologies facilitates the collection and categorisation of one’s work, promotes communication, without deviation from one’s basic aim (Baron& Brouillard, 2003).

Thus, a network of communication was created, whose basic characteristic was the bi-directional relationship with the department of Early Childhood Education, and which included:

a) the working group, consisting of 30 practitioners on a voluntary basis from private and

public day nurseries of the capital city and other parts of the country

b) the group of students doing their on-the-job supervised practice during the 8<sup>th</sup> semester of their studies (50 future educators)

We suggested the use of the educator's portfolio in electronic form. So, we connected the future educator with experienced colleagues, believing that this enhances his/her professional development. The proposition specified that the participating practitioners and future practitioners should select and present what best characterized their educational work in regard to actions with children, colleagues, parents and social partners.

The prevailing definition for the portfolio specifies that it is a structured collection (Doolittle, 1994) of the best works (Wolf, 1991), which also implies the reasons for selection, as well as self-reflection and cooperation. It is a record of the work that is built-up through time and in different contexts and includes programming, implementation and evaluation. When the collection of items to include is selective, reflective and collaborative, it highlights the teacher's gradual professional development and in a variety of contexts. It is definitively much more than a list of works because, although it does include samples of lesson plans and works by the pupils, these are accompanied by reflective thoughts about their essence. Therefore, the portfolio is different from a file in which several works are accumulated.

We think that the portfolio is an educational tool that concerns all the members of the educational process (teachers and students) of all levels of education. Wolf (1991) reports that a teacher's portfolio should fill two key functions: self-development and evaluation of his/her professional intervention.

The portfolio of the educator was first created in tertiary education to facilitate the evaluation of workshop learning as well as for students doing their on the job practice and subsequently practitioners in the field. It is a collection of works created by the individual (or carried out with his/her help) in authentic situations and which he/she chooses to preserve and organise in order to improve his/her knowledge and skills.

The main objectives for the creation of a portfolio for some theorists focus on the improvement of the content of pedagogic work and in its evaluation, while others consider that the most important objectives are strictly qualitative and allow reflection on the pedagogic practice, the evaluation of the effectiveness of interventions, empowerment of self-

knowledge and self-esteem through the acknowledgement of weaknesses so that they can be surpassed as well as strong points in order to be further cultivated. It significantly contributes so that the educator consciously evaluates his/her theoretical knowledge and its relation with practice.

The content of the portfolio must include all the components of the educational work. Beginning from the work performed in class, we can also find programming, preparation of actions, evaluation of the students and of the programme, group interventions with colleagues or parents, with ministry officials or social partners. Some theorists argue that the most important issue is to, mainly, include proof of work or cooperation or evaluations of third parties e.g. parents, as well as information on the educator's training and new knowledge, his opinion on the conditions of the place and the effectiveness of the daily "programme" and, finally, the professional's personal opinion on the philosophy and the disciplinary targets of the institution he/she serves. Apart from the scripts, videos, photographs, other evidence may also be included.

The structure is mainly based on the selection of the works to be included. Some theorists propose that it should be structured with consideration of the targets intended to be accomplished in order that reflection and exchange with more experienced colleagues is supported.

Teachers improve their interventions by introducing reflective thinking and practice. Self-reflection is facilitated by self-assessment and produces questions like the following: What must I necessarily present in my portfolio? Which parts could enhance self-reflection? Are these the best works and why?

The portfolio's main fields of influence in education are:

- 1) Preparation and planning of educational and pedagogic actions.
- 2) Connection between training and instruction.
- 3) Assessment of pupils.
- 4) Assessment of learning conquests-achievements and self-reflection.
- 5) Learning environment.
- 6) Incorporation of educational institutions into the community.

The educator has a wide range of choices concerning the type of data that he may include in his portfolio. It is usually considered that the best impressions of his work must be included.

These may concern proof of effective instruction, material created by the educator himself or assessment by others. Additionally, the portfolio may include pupils' participation data in action plans, with videos and pictures etc. The great advantage of videos and pictures is that they allow the careful observation of him in action and facilitate self-assessment and exchange with colleagues.

In regard to the students of pedagogic departments, Aitken (1993) notes that the portfolio performs the following functions.

- 1) enhances the student's learning process
- 2) facilitates self-assessment, which leads to better self-knowledge
- 3) raises the student's self-esteem through the information he receives on his personal development and works
- 4) improves the student's abilities through definition of identity of the received knowledge.

## DISCUSSION

The difficulties emerging by the implementation of the portfolio principally focus on its own development; it is highly important that it is done gradually and on condition it has the approval of all the stakeholders. The gradual built-up of the portfolio is the most significant guarantee of its acceptance and ownership by all. Its electronic form may cause insecurity to some of the older practitioners but, at the same time, it becomes a motive for creativity for the younger ones, as the evolution of technology follows them since their basic studies.

A difficulty concerns the time needed by an educator to prepare a portfolio and reflect individually or collectively and handle it with the time-consuming attention needed, so that it does not degenerate into a classification folder.

An emerging problem of the portfolio could be the reliability of the selection criteria (Doliopoulou & Gourgiotou, 2008); this makes the function of the portfolio problematic as an instrument of professional evaluation due to the subjectivity of the criteria included. It emerged that the most important and interesting thing in the case of the portfolio is not so much the portfolio itself, as what the creators-educators receive from its implementation.

We can categorise the positive outcomes of the intervention in terms of:

- The high index of the practitioner's response to an innovation that concerns themselves within their profession. The portfolio has given the participants the

opportunity for a systematic collection of information that allowed the evaluation of the degree that the modifications of the desired individual behaviours were achieved.

- The culture of two basic types of thought a) of *converging* thought, that expresses “the established processes and opinions for the discovery of a solution to a problem” and which is closely connected with critical thinking, and b) of *deviating* thought that focuses “on the original ideas and methods that are used by the individual in order to form alternative proposals” and constitutes the main characteristic of artistic creation (OEPEK, 2007).
- The right of choice and the non-directional attitude in creating an e-portfolio show confidence in the competence of a person (a person with wishes, interests, motives, abilities, skills and knowledge) to find his/her own way.
- The choice of different ways of presentation among them (scripts, pictures, music, video...), thus exhibiting more characteristics of themselves concerning their personal achievements, like data from their participation in action plans, human relations process, pedagogic material created by the educators themselves and aesthetic interventions in the space. Videos and pictures have the great advantage of constituting evidence, on the one hand and, allowing careful observation of the educators themselves in action, on the other. Thus, it emerged how much they facilitate self-assessment and exchange with colleagues.
- The change in their cooperation within a pedagogic group. Interactive searching for new ideas in their pedagogic work, along with acceptance of the “other”, shows signs of professional and personal development. The portfolio gave the opportunity for creating, within the group, a safe, free and stimulating “positive experience”.

Finally, our results analyse the use of the portfolios in the work of practitioners and of future educators (students). It shows that the portfolio allows the understanding of information on abilities that went unappreciated by traditional assessments. The student can convert, from an object of evaluation to a self-evaluator of his development and he is given the chance to communicate his work to a group (of fellow-students).

Consequently, this type of portfolio can accompany the professional throughout his career, starting from his student life, on the basis of continuous training, dissemination of his work and exchanges with colleagues.

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*Contact details:*

**Nantia Tsaoula**

**Fenny Sidiropoulou**

**Mania Poubrou**

**Natasa Kakoulidou**

Technological Institute of Athens

[Nantia\\_tsaoula@yahoo.gr](mailto:Nantia_tsaoula@yahoo.gr)