

Teachers' Inquiry-Based Research

Classroom-based action research conducted by NACE member schools

Dr Ann McCarthy, NACE Associate

February 2019

In partnership with



UNIVERSITY OF
WINCHESTER
CENTRE FOR REAL-WORLD LEARNING



Executive summary

The most successful education systems... invest in developing their teachers as reflective, accomplished and enquiring professionals who have the capacity to engage fully with the complexities of education and to be key actors in shaping and leading educational change. (Donaldson, 2011:4)

Regardless of career stage, the self-reflective teacher will commit to the continuing development of teaching skills and subject knowledge. The teacher who is also a researcher or inquiry-driven practitioner may keep up to date with existing research but will also recognise that one's own classroom is a unique environment. The teacher will therefore want to identify the key features of that unique environment and target acquired intelligence to benefit current learners. A one-size-fits-all model from external research or training may not deliver the precision that the teacher seeks. Action research will therefore provide a systematic inquiry into one's own teaching which:

allows teachers to study their own classrooms... to better understand them and to be able to improve their quality or effectiveness (Mertler 2012:4)

The use of inquiry-based action research allows teachers to identify specific areas of practice which have the potential to be refined or improved. They can raise questions relating to their practice and plan a series of actions which may lead to changes in classroom practice and outcomes. This is a data-driven model which empowers the teacher as a professional who can precisely analyse the impact of practice in the classroom.

Teaching is often driven by external factors and good practice is defined through current educational jargon. The class teacher does not always know how or why this relates to the class they teach. When teachers approach their own practice as researchers, they can achieve improvement through a question, plan, action, response and analysis cycle. They can move the focus from themselves as teachers to the pupils as learners and they can break through the jargon. They will hypothesise on future possibilities which might result from a change in practice. They then question their practice and what they hope to achieve. What must they do to facilitate learning? How might learners respond to planned actions? What changes because of the planned action? What happens next?

Action research not only has the potential to improve learners' experience but is also a highly effective form of professional development. The power of action research can be further enhanced through communication and collaboration with colleagues.

In a project run from March to October 2018, NACE and the Expansive Education Network (eedNET) brought together a group of teachers who were committed to developing their professional practice through inquiry-based research. Participants received training on the principles of action research and guidance on the process as they undertook research in their own schools. The teachers in this study came from a diverse range of schools in terms of context and geographical location, but all shared the desire to make changes to their own practice to impact on learning. All had a focus on improving provision for more able learners and were engaged with the NACE Challenge Framework.

In preparing for the project, it was identified that many studies highlight the importance of making learning visible. Often teaching focuses entirely on the content the teacher plans to deliver or the constraints of the curriculum, but learners do not always appreciate the reasons for the planned activities in the classroom. By making learning visible to the learner, the teacher helps pupils to recognise success measures and the ways in which learning can be layered or scaffolded as they begin to develop knowledge, skills and understanding. By making the learning visible, pupils are more able to make connections between different activities and then engage more fully in the action of learning.

Visible teaching and learning occurs when learning is the explicit goal, when it is appropriately challenging, when the teacher and pupil both seek to ascertain whether and to what degree the challenging goal is attained, when there is deliberate practice aimed at attaining mastery of the goal, when there is feedback given and sought, and when there are active, passionate and engaging people participating in the act of learning (Hattie, 2008, 22).

Specific examples of this were seen when Year 1 pupils learnt about full stops using pupil-friendly success criteria and had visual clues such as googly eyes to remind them to use full stops. Older learners were taught the relationship between superior quality and authentic texts which were read ahead of the teaching session and then used to examine the styles and structures of writing. They were then able to develop their own writing craft based on a sophisticated understanding of authorial style. Learners preparing for public examinations were able to learn from the experience of other learners when the teacher provided them with well-structured information about the success factors and the relationship between performance and grades.

Learners are often close to understanding but are overly dependent on input from their teachers. They can develop learning rapidly if they have opportunities to develop their thinking or solve problems under adult guidance or with support from peers. Teachers often choose to tell learners what to do because they think they are not ready to move forward independently or have not reached an appropriate stage of development. However, the zone of proximal development was defined by Vygotsky as a means by which potential development could be achieved:

the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, or in collaboration with more capable peers. (Vygotsky, 1978: 86).

Teachers involved in the research were also interested in ways in which they could reduce learners' dependency on them. Several schools researched into the degree of independence pupils had when learning and the opportunities they had to work things out independently or collaboratively. A few teachers addressed issues relating to barriers preventing learners from either starting or pursuing problems without help from the teacher. The teachers themselves were aware that there were times when they stepped in too soon or did not provide enough time for learners to develop their own thinking. In some cases, learners were put off by the language in the questions.

There were several approaches seen when tackling this issue. Some teachers removed the questions altogether as seen in a Year 10 mathematics task. When learners were able to explore a scenario using prior learning, they were more successful than when they were asked a direct question and could provide richer responses. Later, when they had to answer direct questions, they had more confidence in approaching the question as they had previously experienced success. Other learners were helped through the development of a language for learning which included technical terms and vocabulary. Having provided pupils with the tools for learning, there was also evidence of greater depth of study and clarity of thought when the classroom practice was moved from directive teaching to collaborative learning.

In all inquiries the focus was on ways in which teachers could change their practice to achieve a planned improvement in learners' responses. Although these were time-restricted, small-scale projects, all those reporting to the group could report positive changes. All participants had a greater awareness of the nuances of pedagogy which lead to improved learning environments and all had begun to extend their learning to a wider audience within the school. They understood that the findings from these small-scale projects were not generalisable, but they did resonate with current

knowledge regarding pedagogy. The action research practice could be used more widely, and their findings were transferable to other age groups and other learning environments.

The strength of this work is that it is particular to the teacher, the class and the school, but also reinforces the importance of the teacher as a researching professional. Through the use of inquiry-based research the teacher is empowered to make change, learners benefit from bespoke teaching which responds to their specific needs, and the organisation develops as a learning environment.

Background

NACE supports schools who are committed to improving provision and outcomes for all learners through a focus on planned actions to improve provision for more and exceptionally able learners. The **NACE Challenge Development Programme** reflects research evidence, current educational expectations and good practice.

When schools are rated good or better and have successfully achieved the **NACE Challenge Award**, it is important not to become complacent. Teachers have the potential to improve their own knowledge and skills through inquiry-based practice. In turn they can use their improved understanding to enhance the teaching and learning in their classrooms. This project was designed to respond to this belief.

Working alongside eedNET, NACE piloted a teacher learning model for NACE member schools which utilised action research based on learning inquiry methods. The participants were selected from a range of good and outstanding schools who were engaged in the NACE Challenge Development Programme. This included both primary and secondary providers in both the state and independent sectors.

Participating teachers were trained in the research methods needed to undertake a small-scale inquiry. They were each required to select an area of their teaching where they felt they may be able to adjust practice to improve outcomes. They reported on the impact of their work and the way in which it would change their future practice. Small-scale research of this nature benefits the teacher and the learners within the study. Although the findings are not statistically generalisable, they may help to inform practice by illustrating the issues, what has worked well, and what has been achieved.

Methodology

The study took place over a six-month period with classroom-based research activity in the summer term. Teachers began with a **stimulus** based on an issue which concerned or interested them within their own classrooms. They were asked to consider what was going well, what could be improved and how this improvement might be achieved. The objective here was to make use of the teachers' professional wisdom and academic interest to increase the capabilities of the learners.

Based on the stimulus, the teachers were then required to propose a **hypothesis** which might explain or describe what was going on in their classroom. For some the hypothesis was based on a hunch and for others it was reflective of wider reading.

All participants were then encouraged to **research** their own area of interest to find out what others had written on the matter in question. With this information available to them, they used a focused research question which allowed them to investigate the hypothesis, but which restricted the activity to a small-scale study with limited variables. The questions were all written in the form "**If I do X will Y happen?**"

Having established a question, teachers were then able to examine how this question related to school and teaching **priorities**. They then selected a target group and planned the timescale, actions

and resources which would comprise the **intervention**. They needed to provide meaningful feedback on the effectiveness of this intervention, so **evaluation** methods were discussed and agreed in order to provide both valid and reliable information.

Conclusion

All teachers improved their practice and engaged in professional learning which they used to benefit learners. They were able to identify changes which were successful and elements which did not work as well. They then adapted their practice in response to the self-evaluation.

A common factor in teachers' learning was that they realised learners could achieve more and it was possible to increase challenge given the right learning environment. Through a good understanding of their classes they were able to balance the degree of challenge with the need to build and maintain learners' confidence. Teachers were more aware of the impact of the planned teaching and learning activities and therefore became more able to plan for impact. Within this planning and subsequent teaching many teachers provided more explicit instructions with more frequent modelling or exemplars. Teachers found that it was beneficial to extend the amount of time spent on a topic when the time was used to explore a range of problems, developing patterns and connections in learning and thinking.

Teachers found that by giving learners more time to think, discuss, work with others and investigate, outcomes could be improved. Learners became less dependent on teachers directing every action and were able to make decisions about their own learning. They learnt strategies for tackling new ideas which they could use before seeking help from the teacher. Teachers recognised that they had to invest in cultivating positive habits of mind and creating a culture of resilience in the classroom which in turn would improve independence. Within the changes to practice there was a need for shared vocabulary with clear success criteria, structures and resources to support learning.

The teacher who is a researcher in the classroom will become a more reflective practitioner. Teaching becomes increasingly precise and designed to reflect the needs of the class. Teachers who research begin to make more and better use of existing research which they then interpret and adapt to their own classrooms.

One teacher commented:

The process allowed me to have greater autonomy and creativity for tailoring the teaching and learning process, to suit the needs of my children and I felt empowered as a professional to be able to make informed decisions, rooted in theory and research.

The energy and enthusiasm which came from this activity led to teachers extending the new initiatives beyond their classrooms. Dialogue within school and between schools had a positive impact on both learners and teachers. All teachers found that research-based practice was a valuable form of professional development. They were empowered to continue to approach teaching in this manner and to share this practice with those around them.

Find out more



To learn more about NACE, including information about membership, the Challenge Development Programme and school-led research initiatives, visit [nace.co.uk](https://www.nace.co.uk)