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DONALD SCHÖN

REFLECTION AND LEARNING

LEARNING OUTCOMES

Having read this chapter you should be able to:

- understand Schön's theories of reflection-in-action and reflection-on-action
- understand the difference between espoused theory and theory-in-action
- recognise how his work can be applied in a practical situation
- critically evaluate his work.

KEY WORDS

reflection-in-action; reflection-on-action; learning society; double-loop learning; reflective practice; reflection; knowing-in-action; espoused theory; theory-in-use

INTRODUCTION

Donald Schön made a major contribution to developing our understanding of learning and its various processes through his introduction of the practices of **reflection-in-action** and **reflection-on-action**, alongside the notions of a **learning society** and **double-loop learning**. His work encouraged practitioners to critically reflect on their own work as a means of developing and improving their practice and, in so doing, 'touched numerous disciplines and professional practices' (Pakman, 2000: 5). Despite his early training as a philosopher, Schön made valuable contributions in a range of workplace settings, including a management consulting firm, a governmental agency, a non-profit centre for social development and a university department of urban planning, leading him to refer to himself as 'a displaced professional' (Waks, 2001: 37). It was through this vast experience that Schön began to postulate the notion that improvement comes about through reframing professional practice and identifying the importance of self-reflection as a vehicle for learning and improvement. At the same time, he also observed that this was often sadly lacking within organisations.

Influenced by John Dewey's 'theory of inquiry', Schön spent his early academic years examining learning and its cognitive tools (Pakman, 2000). He cautioned that Dewey's work should not be accepted uncritically (Waks, 2001) and instead sought to 'rethink and reconnect' Dewey (Schön, 1983: 357). Both Schön and Dewey saw reflective practice as an alternative to technical rationality, suggesting that the knowledge and experience of the practitioner, rather than science, should be the driving force behind **reflective practice**. However, while Dewey still saw a place for scientific enquiry as an intermediary stage in professional practice, Schön himself saw no place for science, suggesting that 'practice is a knowledge affair' (Waks, 2001: 40).

Schön emphasised the importance of recognising the knowledge of the professional as being key to the development of any organisation. He believed that the practitioner applied a tacit knowledge to any given situation, which he referred to as knowledge-in-action, and suggested that this formed the basis of any future reflections which in turn led to improvements in practice. His work, then, put the onus back on the professionals rather than the organisation's management, with Schön suggesting that any changes made should be a direct result of interactions and reflections within the workforce since those professionals have the best working practices of the organisation.

His work has had significant practical application in numerous organisations, including educational settings, which will form the basis for this chapter. Schön saw the school setting as an ideal platform for that work since he recognised that teachers had a significant amount of knowledge which was frequently constrained by the systems which controlled educational establishments. This will be elaborated on in subsequent sections.

DONALD SCHÖN, THE PERSON

Donald Schön was born in 1930 in Boston, in the United States, and was raised in Brookline and Worcester, Massachusetts. Schön studied philosophy at Yale University, graduating in 1951. He also studied the piano and clarinet at the Sorbonne, Paris, and the Conservatoire Nationale de Musique, and was awarded the Premier Prix. He was an accomplished musician and played in jazz and chamber groups. It was through this musical improvisation that he began to consider its application in a professional situation, through a practitioner's ability to 'think on their feet'. He also used his musical background as a metaphor for his observations on **reflection**.

Schön completed a BA in philosophy at Yale University, and on graduating he received the Woodrow Wilson Fellowship and went on to study for his Master's and Doctoral degrees in philosophy at Harvard University. It was during his doctoral studies that he became interested in the work of John Dewey, using Dewey's 'theory of inquiry' as a focus for his doctoral dissertation. It was this work which provided him with the pragmatic framework that can be seen as a constant through his subsequent work.

Schön spent a brief period working as an academic, teaching philosophy at the University of California, Los Angeles, followed by a period as Assistant Professor of Philosophy at the University of Kansas City; he also spent two years from 1955 in the US Army. On completion of his two years' army service Schön took up a post as a senior staff member in a large industrial research and consulting firm, Arthur D. Little Inc., where he worked alongside his colleague Raymond Hainer, with whom he began to develop his early ideas on the structure and effectiveness of organisations. It was during this time that his first seminal work, entitled *Displacement of Concepts* (1963), was published. This was later republished as *The Invention and Evolution of Ideas* in 1967. Through this work he examined 'the ways in which categories are used to examine "things" but are not themselves examined as ways of thinking' (Parlett, 1991, in Pakman, 2000: 5).

This book was the first of many publications by Schön, who used his experience in a variety of organisations to examine the effectiveness of structural organisation. In his writing he encouraged organisations to look at things anew and he became fascinated by learning and its cognitive tools. He saw reflection as being an essential component in the learning process, but also identified that reflection was frequently lacking in organisations and questioned why this might be. In 1970 he was invited to deliver the Reith Lectures in London where he examined how learning occurs within organisations and societies which are in a permanent state of flux. This provided the catalyst for his ground-breaking book, *Beyond the Stable State* (1973), in which he argued that change was a fundamental part of modern life and, as such, it was imperative that organisations developed systems which were capable of learning and adapting to such changes.

In 1968 Schön became a Visiting Professor at the Massachusetts Institute of Technology (MIT) where he was later appointed Ford Professor of Urban Studies and Education. He remained at MIT for the rest of his professional career until his death in 1997, serving as Chair of the Department of Urban Studies and Planning and later becoming Ford Professor Emeritus and Senior Lecturer in the School of Architecture and Planning.

It was during his time at MIT that Schön began his collaboration with Chris Argyris, a period that proved to be fruitful in terms of further writing and research, resulting in three key publications: *Theory in Practice: Increasing professional effectiveness* (Argyris and Schön, 1974), *Organizational Learning: A theory of action and perspective* (Argyris and Schön, 1978) and *Organizational Learning II: Theory, method and practice* (Argyris and Schön, 1996). These publications continued the themes which emerged in *Beyond the Stable State*, particularly around learning processes in organisations and the development of critical self-reflection as a means of operating in a more effective manner.

Schön's time at MIT also provided the catalyst for the work for which he is perhaps best known, that of processes and development of the reflective practitioner, leading him to 'develop an overall epistemology of professional practice, based on the concept of knowledge-in-action' (Pakman, 2000: 6). Evaluating the work of a range of practitioners in the field, Schön observed that such professionals demonstrated a capacity to reflect-in-action (that is, apply their knowledge to any given situation) and make any necessary adjustments to their practice in increasingly complex, uncertain and unique situations. He postulated that this was effective not just when acting in isolation but also when professionals had the opportunity to share their reflective practice, which would allow them to reconstruct theories of action and develop new strategies. These theories were expanded on in his book *The Reflective Practitioner: How professionals think in action* (1983), in which he continued to advocate the importance of a *reflective practicum*. It is this work that has perhaps had the most significant influence on professional development, particularly in the education sector, where the notion of reflective practice through training and development programmes has become firmly ingrained.

SCHÖN'S THEORY OF REFLECTION AND LEARNING

We have already touched upon the notion that Schön's theories centre on his desire to support organisations in managing learning and change, particularly through the vehicle of self-reflection, and in this section we will consider further these theories of reflection and the important role of the individual within this. It should be noted that this captures only a small part of his theories, but due to the intended audience for this text it is the theories deemed the most relevant to the education profession which will be covered here.

When considering school effectiveness Schön identified a series of interrelated concepts which should be applied in assisting settings to become more reflective and therefore more effective. He recognised that within the school community there was a significant knowledge base which practitioners subconsciously applied to their everyday actions. This he referred to as tacit knowledge – the knowledge that an individual has which is both automatic and intuitive. He believed that this knowledge was reflected in the actions of the individual and coined the phrase *knowing-in-action* to explain this, suggesting that this is the knowledge that practitioners hold within themselves to enable them to perform their daily activities effectively. However, Schön (1990 [1987]) also observed that this tacit knowledge was often difficult to make verbally explicit, suggesting that while knowledge was clearly evident through actions, few practitioners were able to verbalise why certain actions had been taken, suggesting unconscious knowledge or in some cases unarticulated common sense revealed through action (Ghaye and Ghaye, 1998). In addition, he recognised that practitioners do not simply utilise someone else's theories but instead hold and develop their own theories – a particularly relevant skill when considering the importance of tailoring theories at an individual level.

It is important to consider at this stage a further theory which Schön advanced, that of technical rationality. Here he suggested a possible conflict between theory and practice, with the risk of the teacher becoming a mere technician, delivering content generated in higher educational establishments and research centres which may or may not be applicable to their particular setting and audience. He identified that teachers' practical, first-hand knowledge risks being devalued if they unquestioningly apply this theory to practice without considering the context of their own individual setting. Where they fail to question the values that underpin their practice and make them teachers, this results in their being seen as technicians who simply deliver content (Ghaye and Ghaye, 1998).

Schön saw real problems with this approach to teaching, particularly given the varying contexts for which the theory might apply. He recognised that it was not possible to solve teaching problems by simply applying someone else's theory, and suggested that the application of theoretical knowledge may not be appropriate to the vast majority of problems experienced by teachers, cautioning against underestimating the first-hand knowledge and experience of the teaching profession. Ghaye and Ghaye explain that:

Schön turns this technical-rational view around and talks about how reflection helps us to pose or 'frame' problems, how we should value and use this kind of knowledge that is embedded in our workplace, generated by our practice and shared among teachers themselves. (1998: 4)

Schön described *reflective practice* as 'a dialogue of thinking and doing through which I become more skillful' (1990 [1987]: 31), suggesting a process by which thought is

linked to action (Osterman, 1990). However, Argyris and Schön (1974) also identified that practitioners frequently needed support in framing their reflections, often being unaware of where theory was being applied to practice or how reflections could support the development of learning. They saw reflective practice as an integral part of a person's professional development, suggesting that reflection required concentration and careful consideration.

Schön identified two specific types of reflection undertaken by practitioners in the field, these being *reflection-in-action* and *reflection-on-action*. His distinction here is that a person who reflects-on-action is reflective and thoughtful, while one who reflects-in-action is reflexive (Thompson and Thompson, 2008). Reflecting-in-action first embodies the idea of 'thinking on one's feet', whereby the experienced practitioner consciously evaluates a situation and makes any necessary changes on the spot during the event. This relates specifically to uncertainty or unfamiliar situations, whereby an unanticipated circumstance is acknowledged and addressed with the minimum of fuss. As explained by Schön:

The practitioner allows himself to experience surprise, puzzlement, or confusion in a situation which he finds unusual or unique. He reflects on the phenomenon before him, and on the prior understandings which have been implicit in his behavior. He carries out an experiment which serves to generate both a new understanding of the phenomena and a change in the situation. (1983: 68)

It is the experienced practitioner with a wealth of knowledge and experience who Schön believed is able to deal with this type of situation most effectively. However, he also suggested that a person who has spent a long time doing the same job in the same way may be at risk of missing opportunities to think about what they are doing and may repeat the same errors over and over, suggesting that even when situations occur as expected, a level of reflection should still be encouraged.

In addition to this process of reflection-in-action Schön suggested that thinking on one's feet should be later followed up with reflection-on-action, a process to be undertaken after the event. He argued that this may be done through recording an event or discussing what happened with a colleague. The act of reflecting-on-action enables the practitioner to consider what happened and evaluate how effective the action was. This in turn supports the practitioner in their professional development, since reflections should form a bank of ideas which the practitioner may draw upon in their future practice.

Schön (1990) identified that the solutions to problems are often as result of how problems are constructed or perceived in the first place; this he referred to as the framing and reframing of problems. Schön (1990) saw the framing of a problem as how it is conceptualised or constructed, i.e., the sort of problem it is, and believed that how the problem is framed is just as important as the solutions applied (Philpott and Menter, 2014). Additionally, the framing of problems forms an important part of the reflective process through the reflective conversations held with

oneself or colleagues and the subsequent changes to practice and the evaluation of the consequences of these changes.

Schön also suggested that such reflections are best undertaken at a wider level in order that shared experiences might assist in whole-school improvement. Furthermore, according to Argyris and Schön (1974), this shared reflection forms an important part of the developmental process for organisations, particularly in respect of how the contradictions they saw in workplace settings might hinder effective reflective practice (Lindon, 2014). They identified two conflicting underpinning theories: that of **espoused theory**, the outlook and values on which people believe they base their behaviour; and **theory-in-use**, the outlook and values that are actually seen working in practice (Lindon, 2014). Argyris and Schön (1974) propose that people build mental maps to plan, implement and review their actions. However, they go on to argue that these maps generally do not reflect the theories they espouse, hence there was frequently a gap between what people believed they did and what they actually did. Moreover, Argyris (1980) later observed that people are often unaware of the theories or maps they do use. It could be argued then that if people are unaware of the theories that drive their action, a change in behaviours is unlikely, leading Argyris (1980) to suggest that congruence between theory-in-use and espoused theory needs to be sought.

Argyris and Schön (1974) identify three distinct components in the theory-in-use model. In the first instance individuals will hold governing variables which underpin actions. These governing variables are the acceptable values by which a person is influenced, from which actions will be implemented in order to keep variables within what they perceive to be an acceptable range. Inevitably these actions will initiate consequences, both intentional and unintentional, which will impact both the self and others. In cases where an intentional outcome is achieved, then, there exists congruence between intention and outcome; however a mismatch between intention and outcome may lead to a failure to satisfy governing variables, which can result in dissatisfaction. Argyris and Schön (1974) propose two responses to this mismatch, identified through single- and double-loop learning (see Figure 12.1).

In single-loop learning, actions are modified according to governing variables and the difference between expected and reached outcomes. Expected outcomes are signified by the goals and frameworks, or governing variables, of an institution and learning reflection is centred around how far the institution is operating effectively within these. Any changes or modifications occur where expected outcomes are not met; however, this is frequently done at a local level with those involved adapting behaviours and actions to mitigate against any potential shortcomings and improve the situation. Philpott and Menter (2014) suggest that in this case goals and frameworks of action are frequently taken for granted, thus the aim is to seek ways to operate more effectively within them rather than seek to identify any potential problems underlying the institution's governing variables. Furthermore, the tendency is to rely on utilising small fixes and adjustments which may only temporarily address the

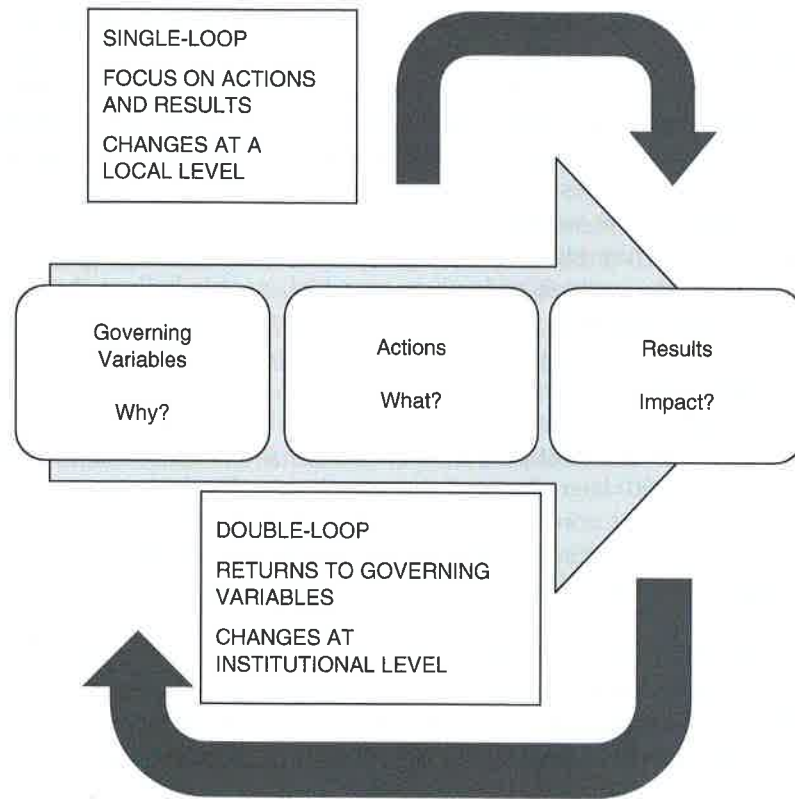


Figure 12.1 Single- and double-loop learning

shortcomings of institutional goals and frameworks and may ultimately lead to further problems and challenges, in which case, adopting a double-loop learning approach is a more pragmatic solution.

In double-loop learning the aim is to identify any underlying causes behind any unsuccessful actions with a view to correcting or adapting these. In this instance the practitioner must return to the governing variables and determine whether changes need to be made to the goals and actions of an institution and the operational approaches applied to these. In this case, rather than just considering whether an institution is doing things right as seen in the process of single-loop learning, it seeks to analyse processes at a deeper level, questioning why processes might not be working and examining any patterns. Ultimately this leads to a deeper understanding of where assumptions might have come from, which in turn results in more intuitive decision making. Moreover, reflection is taking place at organisational level, resulting in the removal of the root causes which lead to organisations not operating as effectively as they might.

Schön argued that while double-loop learning is the most desired model, it is not always possible if the organisation itself is not willing to examine and change its fundamental beliefs. Moreover, organisations are very much shaped by the individuals within them who themselves may be influenced by bias and constraints to the learning process. Thus, while organisations may show a willingness to adapt their goals and frameworks in response to reflections and feedback, there is no guarantee that individuals within it will show the same commitment, particularly if there is a lack of parity between the values held by the individual and those of the organisation. This will be examined further when we explore how Schön's theory might be applied to practice.

LINKS WITH OTHER THEORISTS

As we have seen previously, Schön built on Dewey's work in his doctoral thesis. As such, links between the two theories can be clearly seen. Dewey saw reflection as a rational and purposeful act, which was directly linked to thought. For him reflection was an active process in which prior belief and assumptions were examined and then used in future practice. However, Dewey applied a somewhat scientific approach to the reflection process, in which various phases or aspects of thought should be viewed as part of the reflection process, including elaboration, hypothesis and action. Schön rejected this notion, believing there to be no place for science in the reflection process, suggesting instead that it should be a more natural and fluid process.

Perhaps the disparity here lies in the underlying beliefs regarding the purpose of reflective practice. For Dewey, reflection supports the practitioner in the development of democratic principles, whereas for Schön, reflection has a far more practical purpose, helping the practitioner to learn from and address complex problems experienced in the workplace. In this respect parallels can be seen with the work of David Kolb, who also sought a theory which was designed to offer solutions to everyday problems. In Kolb's model the process by which adults learn from their experience is elaborated on by way of a four-stage learning cycle, suggesting that learning is a cycle which perpetuates more learning. However, where Kolb suggested four phases of learning from experience – concrete experience, reflective observation, abstract conceptualisation and active experimentation – Schön identified only two processes – that of reflection-in-action and reflection-on-action – suggesting a much simpler and more practical approach.

In recent years Boud et al. (1985) have elaborated on the theories of Dewey and Schön, but they have also gone further and added another dimension to the reflection process which Schön largely ignored: the importance of emotion in the reflection process. Boud et al. have gone so far as to question the validity of a reflective process in which human emotion is ignored entirely and suggest that reflection is an activity in which people 'recapture their experience, think about it, mull it over and

evaluate it' (1985: 19). They have identified three key aspects to the reflection process: recalling or detailing salient events in a specific experience; attending to their feelings regarding the event; and finally, evaluating the experience in the light of existing knowledge while integrating new knowledge into an existing schema. We can see here parallels with Schön's work in terms of recalling and evaluating an event – reflection-on-action – but he made no reference to the feelings that came into play during the experience.

Schön's work was influential in the field of education, where he sought to encourage professionalism through reflective processes. This has parallels with the work of Lawrence Stenhouse, who argued that it was essential for teachers to reflect on their own practice, share experiences and evaluate their own practice in order to improve the educational experiences of their pupils (Aubrey and Riley, 2021). Moreover, Stenhouse believed that the teacher should take on the role of researcher, who through the process of action research should seek to continually seek opportunities for professional development, which too harmonises with Schön's concept of the reflective practitioner.

CRITIQUING SCHÖN

Schön's work was not without its critics, and we have already seen that Boud et al. (1985) were critical of a model of reflective practice which did not account for the feelings and emotions of the practitioner at the time of the experience, since a person's emotional response to a situation will surely impact on their action. As each emotional response could potentially result in a different action, this must be taken into consideration when using reflection as part of the learning process.

A further criticism of his work relates to the distinction between reflection-in-action and reflection-on-action, with both Eraut (1994) and Usher et al. (1997) suggesting that he failed to make clear what is actually involved in the reflection process, resulting in work which lacked clarity and precision (Finlay, 2008). Thompson and Thompson (2008) acknowledge that Schön did draw a distinction between reflection-on-action (reflective) and reflection-in-action (reflexive). However, where Schön saw the reflective process as one which was thoughtful as opposed to reflexivity being self-aware and influencing the process, Thompson and Thompson (2008) believe the two should not be separated, suggesting that both encompass being thoughtful and self-aware. They state, 'in our view, reflective practice needs to be reflective in both senses of the word: thoughtful (analytical and well-informed) as well as self-aware or "reflexive"' (2008: 20) and propose that reflective practice is a dimension of reflexive practice.

Eraut (1994) suggests that Schön failed to take into consideration the time factor when developing his theories, arguing that good reflection is a time-consuming process and practitioners often have to make decisions in a hurried manner, leaving little time for effective reflection. Furthermore, Harris (1989) observes that

Schön's reflection-in-action offered no place for technical or scientific knowledge in the reflections undertaken by teachers, and that while a starting place for reflection may well be through experiences, examples and observations, she cautions that there should still be a place for the explanatory theories which underpin practice.

There is some debate as to how far Schön's theories really impact on practice, with Richardson (1990: 14) suggesting that, as his theories are 'a descriptive concept, quite empty of content', there is no evidence to suggest that the reflections carried out by practitioners either in or on action have supported them directly in improving practice. This is further emphasised by the fact that Schön does not appear to have reflected on his own theories in order to ascertain the accuracy of his assumptions. Finally, Moon (2009) raises the question of the practicalities surrounding reflection-in-action and suggests that there is little difference between reflecting in and on action, since by stopping an activity in order to make adjustments the practitioner is then automatically reflecting-on-action. She also suggests that such adaptations are part and parcel of the practitioner's cognitive abilities and, as such, require no specific terminology to explain the process. This supports the earlier observation that it is not Schön's theories which are open to criticism, rather his ability to articulate and define meaning.

APPLYING SCHÖN FROM AN EDUCATIONAL PERSPECTIVE

Schön believed that skilled practitioners are reflective practitioners who use their experience as a basis for assessing existing theories and their observations to develop new theories (Osterman, 1990). He developed his theory by suggesting that it is the practitioner's ability to deal with unexpected or unexplained phenomena which truly reveals their ability to think on their feet and reflect-in-action, making any necessary adjustment to practice to counteract such events, and later reflecting on the effectiveness of this in order to build on and develop their skills as practitioners.

We can see, then, how Schön's theory should fit comfortably into an educational establishment, where teachers are frequently faced with an unpredictable audience alongside constant change through government agendas and changing school policy. It is not surprising, therefore, that his work was seen echoed in a growing focus on self-reflection in professional development programmes (Osterman, 1990). However, Osterman (1990) also observes that schools traditionally fall short of encouraging reflective practice, since reflection frequently results in critical thinking and innovation, which are not necessarily valued in school settings.

In considering why this might be the case we need to return to the earlier discussion on technical rationality. Ghaye and Ghaye (1998) argue that schools have become guided by results-driven, standardised curricula which leave little room for teacher creativity and in which the necessity for teacher reflection is limited by the requirement to deliver a prescribed curriculum – in this scenario the teacher really does become the technician. Additionally, when considering the conflict between espoused

theory and theory-in-use there may well be a tension between the governing variables in an educational setting, which may well be in conflict with individuals' own guiding principles and perhaps in turn impact on the effectiveness of reflection.

However, setting aside these potential barriers, reflection is in fact a fundamental part of practice in schools. Limitations may well be observed at whole-school level as a vehicle for change, but individually, the most effective teachers undertake reflective practice as a matter of course in their everyday work. Whether through a whole-school agenda or at an individual level, there is a genuine desire to improve quality for the individual, and reflection-on-practice is a vehicle by which the quality of teaching and learning can be developed further. In practice, this may be as straightforward as evaluating the effectiveness of a session plan in terms of pupil outcome or undertaking an assessment at the end of a module to evaluate the effectiveness of a series of sessions. At each level the key to self-reflection is the practitioner's ability to consider the reasons why sessions were effective so the same might be repeated, but, more importantly, evaluating less successful sessions and asking themselves the more difficult question of 'What went wrong?' so as not to repeat mistakes. This self-reflection should not be seen as navel-gazing but a genuine attempt to build on good practice.

We have also seen that Schön did not believe reflection should be confined to happening after an event, and perhaps of more importance to him was the notion of reflection-in-action – making necessary adjustments to actions during the event itself. Schön thought that this action celebrated the art of teaching, allowing for continual interpretation, investigation and internal conversation, and also allowing the teacher to apply existing knowledge to new situations (Sellars, 2013). Reflection-in-action involves a certain amount of self-confidence and experience since it requires the teacher, in some instances, to change a course of action midway through a teaching session or planned course of action. For example, if learners are not meeting the desired learning outcomes it may be necessary for the teacher to return to the basics before proceeding. Alternatively, if learners are finding that the work lacks challenge, then a course of action needs to be taken to ensure that they are able to proceed at a more appropriate level.

Such adaptations require a great deal of skill and mastery, and Schön acknowledged the importance of the experience of the teacher as a source of knowledge for such action to be taken. As previously acknowledged, while a certain level of confidence and competence is required for effective reflection-in-action, when carried out effectively it provides the teacher with a degree of satisfaction and, if followed by reflection-on-action, a growing bank of ideas for future practice.

Of course, much of the reflection that occurs at an individual level is carried out subconsciously and, as previously discussed, Schön (1990 [1987]) recognised that teachers frequently find it difficult to articulate what they did and why. For many it is a case of applying common sense. Osterman (1990) suggests that for reflective practice to be effective there needs to be a mindful consideration of one's actions, specifically those related to professional actions, but Schön observed that some

professionals are resistant to thinking about what they did and why, suggesting that this may in fact paralyse action (Lindon, 2014).

In this respect there may be an argument for schools encouraging a more whole-school approach to reflection, since engaging in dialogue about practice may encourage practitioners to verbalise their actions and share good practice. Scott (2008) suggests that knowledge is frequently embedded as a result of previous experience, in which case discussing practice with others will allow the practitioner to rethink their actions and re-evaluate good practice. This in turn will support less experienced colleagues in developing their own practice. Osterman (1990) suggests that reflective practice fosters self-actualisation and engenders a sense of empowerment, which must be seen as a positive state in any educational setting or context.

This type of professional dialogue may also serve as an agent of change at a whole-school level. If we return to Argyris and Schön's notion of single- and double-loop learning, whole-school reflection may force schools to look at their underpinning values or governing variables. If practitioners feel constrained by the systems and values that govern their practice, then this may result in conflict, inhibiting effectiveness. Encouraging schools and other educational settings to confront assumptions may reveal that key values are outmoded and conflicting and require change. Bringing organisational values in line with those of practitioners should increase effectiveness. Schön saw this as true reflection, since practitioners are delving below the surface in order to address problems.

OVERVIEW OF APPLICATION: SCHÖN'S IDEAS FOR CLASSROOM PRACTICE

From an educational perspective reflection should be seen as integral to classroom practice, with practitioners seeking to gain new insights into their practice through actively reviewing the impact of their actions on their students. Furthermore, through applying both single- and double-loop learning, opportunities should be sought to challenge everyday practice, as well as critically evaluating one's own practice. Following are some suggestions as to how Schön's work might be applied practically in an educational setting.

Reflection-in-action

- This involves reflecting during an activity, thereby allowing for changes and modifications to be made during the learning process while it can still be of benefit to the learners. From a practical sense this would proceed in the following way:

(Continued)

- Consider what should be happening - for example, when teaching a new topic or concept what would the expectation be of the learners?
- Decide the best course of action - if expectations are not met then consider how this can be rectified before it impacts negatively on the experience of the learners. This might include all learners or just a small group.
- Act now - rethink how the topic or concept could be otherwise taught and bring the learners back together to revisit it. This might involve approaching the problem in a different way or utilising resources to support learning.

Through the process of reflecting-in-action it is possible for the practitioner to draw on their knowledge and experience to address unexpected situations and avert further situations which might impact on learning. Furthermore, this also reflects a personalised learning approach as strategies are sought to meet the needs of all learners.

Reflection-on-action

- This involves reflecting after the event, considering how evidence taken post session can lead to future improvements in practice. Schön (1983) sees this reflecting back as a means by which knowing-in-action might have contributed to an unexpected outcome. That is, a practitioner will draw from a bank of skills and knowledge which on reflection may not be fully applicable to the given situation. Reflection-on-action proceeds in the following way:
 - Re-evaluate the situation - this should happen soon after the event while it is still clearly remembered. It is worth considering the influence of knowing-in-action at this stage in evaluating why a specific strategy was applied in the first place and reflecting on why the strategy was not successful in this instance.
 - Consider alternative strategies which might be used in the future. This might involve drawing on other strategies, or entering professional discussions with colleagues. As this process is done outside the classroom it allows for deeper thinking and in some cases further research into the problems encountered.

SUMMARY

It is beyond doubt that Schön's work has impacted significantly on the work of practitioners, as well as influencing the work of other writers and theorists in the field of reflective practice (Moon, 2009). His work was a catalyst for encouraging practitioners

to view their own practice more critically and, in so doing, enabled them to build on their own good practice and share experience. It could be said that this work empowered practitioners and supported a range of organisations in self-improvement.

In his writing with Chris Argyris on the dynamics of effective leadership, Schön introduced the concept of a learning society, encouraging organisations to view themselves as a learning society capable of undertaking self-improvement through the reflection process. He believed that all organisations should be able to manage and embrace the inevitable changes of an evolving society and look to change the processes and systems within establishments to manage such change.

Despite his early academic background in philosophy, Schön proved himself to be a versatile practitioner and had a long and illustrious career which saw him impacting on a range of workplace settings. He was a prolific writer and published a number of forward-thinking books which still influence practice today, leading the practitioner to become an expert in their field. His lasting legacies, in the field of education, are his theories of reflection-in-action and reflection-on-action, which have provided practitioners with a means to evaluate and celebrate their individual practices.

GLOSSARY OF TERMS

Double-loop learning

In double-loop learning a person will modify a goal based on their experience. The term derives from the fact that in the first loop goals or decision-making rules are used, and then in the second loop any modifications can be made – hence the double-loop.

Espoused theory

A person's beliefs in terms of personal values and attitudes. However, what a person believes these values and attitudes to be may not always be seen in reality. For example, a person may perceive themselves to have the attributes of a team player yet other members of their team may see things differently (see theory-in-use).

Knowing-in-action

The skilled, physical actions which practitioners employ in the classroom on a daily basis. Schön proposed that these actions were a key element of professional practice and are generally carried out subconsciously, with practitioners frequently being unaware of what has been done or being able to verbalise their actions.

Learning society

An educational philosophy which posits that learning should extend beyond that of formal learning into informal learning to build a knowledge economy. The learning

society relates to the activity of learning rather than the place of learning, and responds to a widening participation agenda in which lifelong learning is promoted.

Reflection

A process by which an individual explores their own actions, attributes, experiences and interactions in order to gain insight and move forward.

Reflection-in-action

Sometimes referred to as 'thinking on our feet', reflection-in-action involves drawing on experiences and feelings in order to make decisions as a situation unfolds.

Reflection-on-action

Retrospectively reflecting on practice presenting opportunities to explore actions taken and raise questions regarding why things happened the way they did with a view to informing future practice.

Reflective practice

A conscious process in which actions are reflected on to promote continuous learning.

Theory-in-use

The models which people actually use in practice which may differ from the models they believe they are using (see espoused theory). Theory-in-use is often a truer representation of the individual person.

FURTHER READING

Bassot, B. (2013) *The Reflective Journal*. Basingstoke: Palgrave Macmillan.

A practical student guide to reflective practice which supports beginning practitioners in deep and critical reflection.

Bolton, G. with Delderfield, R. (2018) *Reflective Practice: Writing and professional development* (Fifth Edition). London: Sage.

A critical presentation of theoretical models of reflective practice illustrated with case studies. Chapters 1 and 3 look specifically at Schön's work.

Johns, C. (ed.) (2015) *Becoming a Reflective Practitioner* (Fifth Edition). Hoboken, NJ: Wiley-Blackwell.

An edited text which uses scenarios and case studies to support students in reflecting on and questioning their own practice. The text introduces a number of modules of reflection with an emphasis on the value of using such models.

Newman, S. (2018) *Philosophy and Teacher Education: A reinterpretation of Donald A. Schön's epistemology of reflective practice* (Second Edition). London: Avebury.

A new interpretation of Schön's work, which encourages practitioners to interpret reflection-in-action in a way that encourages development in practice.

Schön, D.A. (1973) *Beyond the Stable State: Public and private learning in a changing society*. Harmondsworth: Penguin.

A follow-up to Schön's 1970 Reith Lectures encouraging the development of social systems which can adapt to the inevitable changes in society.

Schön, D.A. (ed.) (1991) *The Reflective Turn: Case studies in and on educational practice*. New York: Teachers College Press.

A series of case studies on reflective practice in education, raising questions for the reader in terms of methodical approaches and points of view.

REFERENCES

- Argyris, C. (1980) *Inner Contradictions of Rigorous Research*. New York: Academic Press.
- Argyris, C. and Schön, D. (1974) *Theory in Practice: Increasing professional effectiveness*. San Francisco, CA: Jossey-Bass.
- Argyris, C. and Schön, D. (1978) *Organizational Learning: A theory of action and perspective*. San Francisco, CA: Jossey-Bass.
- Argyris, C. and Schön, D. (1996) *Organizational Learning II: Theory, method and practice*. Malden, MA: Blackwell.
- Aubrey, K. and Riley, A. (2021) *Understanding & Using Challenging Educational Theories* (Second Edition). London: Sage.
- Boud, D., Keogh, R. and Walker, D. (eds) (1985) *Reflection: Turning experience into learning*. London: Kogan Page.
- Eraut, M. (1994) *Developing Professional Knowledge and Competence*. London: Falmer.
- Finlay, L. (2008) *Reflecting on reflective practice*. PBPL Paper 52, Open University.
- Ghaye, A. and Ghaye, K. (1998) *Teaching and Learning through Critical Reflective Practice*. London: David Fulton.
- Harris, I.B. (1989) A critique of Schön's views on teacher education: Contribution and issues. *Journal of Curriculum and Supervision*, 5(1), 13–18.
- Lindon, J. (2014) *Reflective Practice and Early Years Professionalism: Linking theory and practice*. London: Hodder Education.
- Moon, J.A. (2009) *Reflection in Learning and Professional Development: Theory and practice*. London: Kogan Page.
- Osterman, K.F. (1990) Reflective practice: A new agenda for education. *Education and Urban Society*, 22(2), 133–52.
- Pakman, M. (2000) Thematic foreword: Reflective practices: the legacy of Donald Schön. *Cybernetics and Human Knowing*, 7(2–3), 5–8.
- Philpott, C. and Menter, I. (2014) *Theories of Professional Learning: A critical guide for teacher educators* (Critical Guides for Teacher Educators). Northwich: Critical Publishing.
- Richardson, V. (1990) The evolution of reflective teaching and teacher education. In: Clift, T.T., Houston, W.R. and Pugach, M.C. (eds) *Encouraging Reflective Practice in Education: An analysis of issues and programs*. New York: Teachers College Press.

- Schön, D. (1983) *The Reflective Practitioner: How professionals think in action*. New York: Basic Books.
- Schön, D. (1990 [1987]) *Educating the Reflective Practitioner: Towards a new design for teaching in the professions*. San Francisco, CA: Jossey-Bass.
- Scott, D. (2008) *Critical Essays on Major Curriculum Theorists*. Abingdon: Routledge.
- Schön, D.A. (1963) *Displacement of Concepts*. London: Tavistock.
- Schön, D.A. (1967) *The Invention and Evolution of Ideas*. New York: Taylor & Francis.
- Schön, D.A. (1973) *Beyond the Stable State: Public and private learning in a changing society*. Harmondsworth: Penguin.
- Sellars, M. (2013) *Reflective Practice for Teachers*. London: Sage.
- Thompson, S. and Thompson, N. (2008) *The Critically Reflective Practitioner*. Basingstoke: Palgrave Macmillan.
- Usher, R., Bryant, I. and Johnston, R. (1997) *Adult Education and the Postmodern Challenge: Learning beyond the limits*. London: Routledge.
- Waks, L.J. (2001) Donald Schön's philosophy of design and design education. *International Journal of Technology and Design Education*, 11, 37-51.