

4 THE RELATIONSHIP BETWEEN THE SUPERVISOR AND THE STUDENT

4.1 The Role of the Supervisor

Among the common complaints, cited by students in their retrospectives on postgraduate research, are those that relate specifically to the supervision that was provided to them during the course of their study. Many of these complaints have arisen because of the misalignments between supervisor and student expectations during the course of a postgraduate research program, and in an environment in which a one-to-one working relationship has had to last for several years.

A concise description of the role of the supervisor and the role of the student would be a particularly useful point of reference for both parties, so that each could try to understand the other's perspective. However, the difficulty with this is that there are as many perceptions of the specific role of a postgraduate research supervisor as there are postgraduate research supervisors and, equally, the specific roles of students vary depending upon their capabilities and potentials, as well as the specifics of the research environment.

The traditional relationship between the supervisor and student was often based upon a master and apprentice model. In such an arrangement, the apprentice researcher followed behind the master, conducting specified research tasks, and observing the master's research characteristics so that, ultimately, the apprentice might also become a master in the same mold as the original.

In recent decades, there has been a significant transition from the traditional research arrangements, which were conducive to a master/apprentice model, to a broad range of new postgraduate models. These arrangements can include:

- Industry-based or industry-oriented research
- Credit-point-based professional research degrees, which include both coursework and research
- University-specific arrangements, such as higher Doctorates, or Doctorates by publication.

Additionally, some postgraduate programs are structured to enable senior industry professionals to upgrade their knowledge and skills in particular areas. The result is that, in modern research environments, the *apprentice* could well be a senior industry professional who:

- Is older than the actual supervisor
- Has more overall professional experience (if not field-specific research experience) than the supervisor.

Hence, maintaining the traditional master/apprentice model becomes difficult, to say the least.

Research supervision has not only changed in nature because of the changing research environment but also because of the increasing number of people undertaking postgraduate research programs. The first of the modern research-based PhDs was awarded in the 19th Century, and for the remainder of that century, the number of people annually involved globally in postgraduate research could have been measured in the hundreds. In the early decades of the 21st Century, the annual numbers are measured in the hundreds of thousands. A corollary of increasing participation rates, and the move by universities around the world to achieve greater efficiencies, is that the nature of research supervision has also changed. Whereas a 19th Century *master* may have only had one postgraduate *apprentice*, the 21st Century *master* may have 10-20 *apprentices*.

As each research *master* increases the number of research *apprentices*, in line with increasing university and societal expectations, the breadth of the *master's* knowledge tends to increase but the depth, in specific areas, decreases. A modern *master* needs to be an expert in:

- Research grant applications
- Occupational health and safety
- Finances and budgeting
- Quality processes,

as well as a whole plethora of other peripheral activities. The time that is genuinely available to allocate to each *apprentice* is therefore diminished. As a consequence, modern *apprentices* need to be more independent and proactive than those of the past and it is also not uncommon for modern *apprentices* to achieve a much greater depth of knowledge in their specific field of study than their *master*.

Given the changes that have occurred in the relationship between the supervisor and the student, as a result of the changing nature of research, one may well be tempted to ask if a simple definition for the role of the supervisor can be still be put forward. However, it is important to note that, although the techniques and practices of the supervisor may have changed over the course of centuries, there is still one fundamental attribute of research supervisors that remains unchanged - that is,

To guide and mentor students in such a way that they can learn about the systematic processes of discovery...

In this chapter, we examine the different approaches to guiding and mentoring that have become commonplace; examine how these can lead to conflict and, subsequently, what can be done to minimize conflicts.

4.2 Supervisor Types

In order to make a discussion on the relationship between the supervisor and student tractable, in this text, supervisors are simplistically divided into two basic categories:

- Master/Apprentice
- Laissez-Faire.

Needless to say, there are numerous shades of grey in between the two extremes put forward here, but the simplistic grouping serves a useful purpose for discussions.

Each of the supervisor categories, at the extremes, tends to maintain a particular belief and value set that is used to govern the approach which they adopt in postgraduate supervision. A range of some commonly-held beliefs is suggested in Table 4.1. Novice supervisors may be able to identify the grouping into which their beliefs best fit.

Not all research students will be able to fit in with one or other of the two basic supervisory categories. It is important for the supervisor to understand where he/she fits and what sort of attributes a potential research student will find best suited to his/her personality. If there is no match between supervisor and student expectations at the outset of the program, then clearly there are going to be difficulties along the way. At the very least, both parties need to be given an opportunity to air their views and expectations to see if a mutually beneficial partnership can be formed.

<i>Issue</i>	<i>Master/Apprentice Supervisor's Beliefs</i>	<i>Laissez-Faire Supervisor's Beliefs</i>
<i>The Research Student</i>	Needs to be carefully trained by an expert	Is already qualified and capable of self-learning
<i>The Research Program</i>	Needs to be mapped out by an expert in order to avoid mistakes	Needs to be mapped out by the student as part of the learning process
<i>Independence</i>	Something that is earned after the apprenticeship	An integral part of the learning process
<i>Publication</i>	The master's name should always appear first because the apprentice is only an assistant in the program	The student's name should always appear first because the student is the driving force and the supervisor is the guide
<i>Interaction</i>	Daily interaction and discussion	Weekly or monthly interaction
<i>Supervisor's Knowledge</i>	Should be far greater and deeper than the student's in the specific field of research	The student may have more depth in the specific field but the supervisor has broader overall knowledge about the process of research

Table 4.1 – Common Supervisor Beliefs

Traditionally, students and supervisors sought each other out, based on mutual research interests. However, it is increasingly the case that students and supervisors are brought together by *the system*. For example, in a collaborative research project, a research student may be recruited in the same way as any other employee would be. Sometimes this could occur through a selection panel rather than through the explicit choice of the supervisor – and sometimes against protestations from the potential supervisor.

It is therefore important that the supervisor and student both have a good grasp of the advantages and disadvantages of each particular type of supervisory arrangement, in order to cope with inevitable problems that will arise.

Some of those who study Table 4.1 will say that it clearly portrays the *Laissez-Faire* supervisor in the best light, while others will say that the reverse is the case. Some research students view postgraduate research as an opportunity to study with an eminent expert and feel that, by walking in his/her footsteps, they can acquire some of the attributes of that expert. These students may actually prefer a *Master/Apprentice* relationship. Other research students view postgraduate research as a means of fulfillment through self-learning and innovation. These students may prefer a *Laissez-Faire* relationship.

From the supervisor's perspective, there is also the issue of student capability. A supervisor who genuinely believes in the *Laissez-Faire* approach may need to recognize that a research student who is put in their care simply doesn't have the capacity or independence to act effectively in an independent learning environment. This is especially true when research students are recruited from countries where undergraduate learning programs are almost entirely rote-based, with little latitude for independent thought and development.

It is important to note that neither of the supervisor belief sets are perfect in themselves. Each has advantages and disadvantages. A suggested set of comparative attributes is put forward for consideration in Table 4.2, in relation to factors that influence the outcomes of the research program and the performance of the student.

<i>Factor</i>	<i>Master/Apprentice Relationship</i>	<i>Laissez-Faire Relationship</i>
	A = Advantage D = Disadvantage	
<i>Risk</i>	A More likely to lead to research outcomes accepted by peers A Research project plan/theory developed with high level of expertise D Lower probability of achieving an outstanding outcome in one's own right	A Higher probability of achieving an outstanding outcome in one's own right D Possibility of an outcome which is not accepted by peers D Research project plan/theory may have fundamental flaws or gaps
<i>Learning</i>	A Experience comes from disciplined training rather than unguided self-learning D Student only strives to reach the level of the supervisor	A Experiential self-learning may lead to student becoming far superior to supervisor D Mistakes may not be identified during the program
<i>Originality/ Creativity</i>	A High levels of drilled rigor may lead to good research practice even without creativity D Creativity stifled - student tends to become a clone of the supervisor	A High level of creativity is promoted D Creativity divorced from rigor may not lead to good research practice

Table 4.2 continued overleaf...

Factor	Master/Apprentice Relationship	Laissez-Faire Relationship
	A = Advantage D = Disadvantage	
<i>Theory</i>	A Generally checked with a high level of expertise D Student may be too trusting of supervisor's erroneous advice	A Student more likely to self-check work and get alternative opinions D Fundamental gaps or flaws may slip through undetected
<i>Research Method</i>	A Student develops a good research technique if supervisor is good D Student may develop a bad research technique if supervisor is bad	A Student's self-learning may lead to deeper experiential learning and high-level research skills D Student may not develop rigorous techniques without drilling

Table 4.2 - Possible Advantages and Disadvantages of Supervisor Types

In summary, the *Master/Apprentice* approach to supervision may provide a more systematic approach to imparting the rigors of research to the student. The key disadvantages are that the student becomes dependent upon the supervisor and inherits both positive and negative research traits - overall, the potential for high creativity is reduced by the process. In the *Laissez-Faire* approach, the obvious advantage is that what the student learns through experiential self-learning may be far more powerful as a research tool than rote learning derived from drilled research procedures. The disadvantages are that the overall risk of presenting research, which is unacceptable to peers, may be higher, and that the student may develop lax or incorrect research practices without sufficient supervisory oversight.

4.3 Interaction Between Students and Supervisors

The purpose of the interaction between the research student and the supervisor is to:

- (i) Plan a research program and modify the plan according to changing requirements
- (ii) Ensure that research takes place in a safe, ethical, systematic and rigorous manner
- (iii) Assist in the development of a series of ideas into a cohesive structure that can become a major or minor thesis
- (iv) Provide ongoing, constructive feedback to the research student in relation to the research program
- (v) Correct or resolve research problems arising from the research plan or conduct of research
- (vi) Assist in the publication of ideas; the peer review of ideas, and the analysis of peer reviews
- (vii) Facilitate the purchase of equipment and resources required for the conduct of the research
- (viii) Facilitate interaction with governing bodies of the university and/or outside collaborators.

The relationship between a research student and supervisor also has other professional facets, and the specific interaction between supervisors and students varies substantially, according to the working relationship between the two, and according to the alignment of personal beliefs.

It is self-evident that the productivity of a research student and supervisor is greater when the relationship between the two is good. Apart from the obvious human tendency to consciously or subconsciously avoid people with which one does not have some personal affinity, there are other professional issues that also come into play. In particular, when there is a good working relationship, there is also a more honest exchange of ideas and opinions than there is in a purely formal professional relationship.

A key problem here is that when students and supervisors have no personal affinity, then the relationship moves on to a formal professional

footing. This tends to lead on to rigid meetings, with typical outcomes being that:

- The supervisor asks the student to achieve particular results, with which the student may not agree
- Rather than causing a dispute in a formal meeting, the student agrees to particular courses of action and then does the minimum amount of work necessary in order to appear to have cooperated
- The supervisor becomes aware that the student may be acting in a passive-aggressive manner but, rather than exacerbate an uncomfortable working relationship, tends to accept the outcomes.

A hallmark of rigid relationships between the supervisor and the student is that the student tends to appear at meetings with formal statements of milestones that have been achieved and of the *correct answers* to the research tasks that have been set. Supervisors then take on a position of infallibility and students take a position built on defending or excusing their fallibility.

Such meetings inevitably lack in-depth discussion on what has not been achieved or of the *incorrect answers* that resulted from the research – that is, the reality of the situation. The end result is that the interaction between the student and the supervisor is little more than a series of formalities at which a superficial exchange of project management information is enacted. The same results (or better) might equally be achieved simply by an exchange of electronic correspondence, and the intrinsic value of a personal meeting has been lost.

It is important that a supervisor not present himself/herself as an infallible font of knowledge that cannot be challenged by the student. It is beneficial for both the student and the supervisor to freely challenge each other's views without rancor or bitterness. As Lao Tzu wrote in the *Tao te Ching*, two millennia ago,

"The Master doesn't glitter like a jewel but is as rugged and common as a stone."

In other words, a true leader (master) presents all his facets to his followers, not just the polished ones.

In situations where there is a good working relationship between the supervisor and the student, there tends to be more in-depth discussion on what has gone wrong with the research:

- Why have experiments failed?
- Why have expected milestones have not been achieved?

- What likelihood there is of achieving particular results in the future?

These discussions are an invaluable part of the research learning process – which needs to examine and understand the *wrong answers* as much as the *right answers*.

In a good working relationship, formalities are removed; students feel comfortable talking about problems – supervisors feel comfortable with the idea of talking about their knowledge limitations. Both accept the concept of personal fallibility and are prepared to acknowledge possible mistakes in a positive fashion.

Putting the situation in another way, when there is a poor working relationship between a supervisor and a student, then research integrity tends to suffer in the process. Student morale drops and supervisor interest in the research diminishes, thereby creating a downward spiral. Even if a good professional relationship can still be maintained under such circumstances, the likelihood of positive outcomes is diminished because the frankness of discussions is eliminated through formality. Needless to say, if both the working relationship and the professional relationship are poor, then the likelihood of a research student achieving a positive outcome is severely limited.

The major problem in supervisor/student relationships is that, often, neither the student nor the supervisor can have absolute freedom in their choice of working colleagues. Students and supervisors are frequently brought together through the machinations of university departments and of common research fields, rather than through the intangible factors that may create a genuinely good working relationship.

It would be all too easy to suggest that when both the working relationship and the professional relationship between a supervisor and a student have eroded, then both parties should seek to make alternative arrangements, through a higher level authority within the university system. However, limitations of expertise in particular fields often restrict the supervisory choices available to students and, in any event, supervisors have a professional responsibility to always be the *adult in the room* and make any given set of circumstances work effectively, whether they like it or not. That is the burden of professionalism – when personal working relationships fail, a good professional relationship still has to be maintained.

4.4 Typical Supervisor/Student Problems

In this section, the objective is to examine the sorts of problems that arise between supervisors and research students during the course of a postgraduate research program. Perhaps, by understanding the nature of these problems, and recognizing that they are relatively commonplace in many research projects, supervisors may come to appreciate that most can be resolved through goodwill or, sometimes, through a self-disciplined approach to professional practice. In many instances, simply recognizing that supervisor/student problems are a natural consequence of a long-term, one-to-one relationship between individuals, cast together through technical circumstance, assists in developing a more mature approach to tackling the solution.

In Table 4.3, a range of typical supervisor/student problems are categorized into broad groups, to highlight the volatile and complex nature of the relationship that can often exist in a postgraduate research program. The problems are cited in terms of the research student's perspective so that supervisors can get an insight into the challenges they face.

The first point to make about the sorts of problems that are cited by students is that they can stem primarily from supervisor arrogance – and a lack of professional maturity in managing people. It is often (mostly) the case that research student supervision is the very first people-management task that a supervisor has undertaken as a professional, so it is not surprising that there will be mistakes and problems along the way. Sometimes, unfortunately, supervisors don't even realize that their students feel ill-disposed towards them and harbor hostility and resentment.

Problem Groups (i) – (ii) can often arise when a supervisor underestimates the intelligence of the research student and their capacity to see through self-serving arguments made by the supervisor. The supervisor needs to be on the high moral ground before there is even a chance of tackling these issues. If a supervisor has:

- Underestimated the student
- Failed to create a professional working relationship
- Failed to put sufficient work into the actual supervision,

then, clearly, resolving these issues is going to be difficult.

Unpleasant though it may be, at some point, a supervisor will need to engage in some introspection and decide whether he/she is genuinely at fault. And, it also needs to be kept in mind that, being the *adult in the room*, the supervisor is always technically at fault in the relationship even when a

student is:

- Cantankerous
- Uncooperative
- Slack in his/her work practices.

The role of people management and supervision is to prevent these sorts of behaviors from getting out of hand in the first instance.

Problem Group (iii) should potentially be the most straightforward one to manage through. If there are technical disagreements between the supervisor and the student, then they should be resolved in a rigorous technical way, and without resort to personal issues or confrontation. Sometimes, the simplest way of resolving technical disputes is to seek the opinions of other peers in the field – as a circuit breaker. Once each party has articulated his/her arguments, there is little to be gained by repeating them, over and over, with increasing animosity. If an agreement cannot be reached between the parties additional, external input is clearly required.

Problem Group (iv) represents the sorts of issues that create the greatest conflict, and usually escalate well beyond the realm of the supervisor and the student. These issues arise because either the student or supervisor views the other party as unethical or immoral. It is often difficult to know how to proceed in such matters, save to consider:

- Is the supervisor certain that he/she has acted in a completely ethical manner?
- Are the supervisor's actions ones that would be considered ethical, as perceived by an outsider who is an independent peer in the field?

If the supervisor's answers to one or other of these questions is no, then there are real problems – often ones that would require referral of the entire matter to a higher level authority within the university. These issues are covered in detail in Chapters 9 and 13.

The obvious answer to tackling the Group (iv) issues is to say that they should not arise in the first instance because, if they have, then a supervisor has made grave errors and has failed in his/her duties. However, there is also the possibility that a student has misinterpreted various actions – perhaps there has been a breakdown of communications. The supervisor has to act to resolve this quickly and professionally.

At all times, it is imperative that a supervisor does not retaliate to student animosity with further animosity. The supervisor's role is to dampen problems that occur, not to inflame them in any way. And, needless to say, there is no room on the part of the supervisor for any form

of hostility (verbal or otherwise) or retaliation.

In Section 4.5, a number of techniques for avoiding a terminal breakdown in the supervisor/student relationship are put forward.

	<i>Problem Group</i>	<i>Typical Problems (Student Perspective)</i>
(i)	<i>Interpersonal</i>	<ul style="list-style-type: none"> • Supervisor doesn't like me • I don't like my supervisor • Supervisor and I argue over everything • Supervisor thinks that I lack intelligence
(ii)	<i>Belief-system / Alignment</i>	<ul style="list-style-type: none"> • Supervisor is arrogant • Supervisor won't allow me to do the project in my own way • Supervisor isn't doing his/her job • Supervisor doesn't contribute anything • Supervisor doesn't know anything about the specifics of the subject
(iii)	<i>Technical</i>	<ul style="list-style-type: none"> • Supervisor and I completely disagree with the plan for research • Supervisor will not accept my findings - asks me to repeat experiments
(iv)	<i>Ethical/Moral</i>	<ul style="list-style-type: none"> • Publications - whose name should be first • Supervisor has presented my work as his own research • I have published a paper without my supervisor's name • Supervisor has made me publish the same paper in two different journals with different titles • Supervisor asks me to falsify results • Supervisor is deliberately delaying my research so he can use me as a publishing machine for his benefit • Supervisor insists on borrowing other research work without providing due credit

Table 4.3 - Typical Supervisor/ Student Disputes (Student Perspective)

4.5 Conflict Management and Resolution of Disputes

One of the most important aspects of any professional relationship between individuals stems from the old adage which simply states that,

"Before putting someone in their place, try to put yourself in their place".

In other words, everyone has a different perspective and, before taking a counter perspective, it is particularly important to understand that of the opposing party.

Another important aspect of conflict resolution is to avoid conflicts in the first instance. Disputes in academia should not become a war of attrition. This is particularly true in postgraduate research supervision where one needs to understand that a relationship must generally continue after the dispute has ended. Hence, both the supervisor and the student need to consider what will happen after a dispute, and what the consequences may be for the research program itself.

A good underlying rule for managing professional disputes is therefore to draw a flowchart – either mentally or physically – on how the process will pan out from the first encounter. Specifically, consider:

- What happens if one party or another inflames the situation?
- What happens if other colleagues or more senior management are brought in by the research student to resolve the dispute?
- Whose side will management take when the relationship between supervisor and student has broken down – and it is the supervisor's responsibility to ensure that it doesn't?
- Regardless of the intermediary steps in the chart, the end result may be that the supervisor and student will still need to work together – in a positive and productive way – if good research outcomes are to be achieved.

As a starting point, in examining conflicts that arise between supervisor and student, it needs to be understood that the role of people management is not simply about telling others what to do. Professional management involves the following basic activities:

- Understanding the capabilities and predispositions of the other party
- Determining the willingness of the other party to undertake a task to the best of their ability
- Negotiating tasks and responsibilities with the other party in such a way that the other party becomes a willing and

enthusiastic participant in the task rather than a begrudging servant

- Enabling the other party to undertake a task (i.e., providing the resources necessary for success)
- Ensuring that the other party is fully briefed on the boundaries of the task execution (i.e., what is permissible and what is specifically disallowed)
- Monitoring/overseeing the efforts of the other party on a progressive basis (i.e., not just at the end when it is evident that the task has/hasn't been completed)
- Providing additional support/input when it is clear that the other party's execution of the task is falling behind
- Understanding whether a failure to complete a task is the result of a lack of capability, resourcing, support, willingness or work ethic.

As a supervisor, who may be entering into a conflict/dispute with a research student, it is important to undertake a self audit, and ensure that all of these basic requirements for management have been fulfilled before even considering the actual dispute itself. From the supervisor's perspective, it may also be helpful to indulge in some introspection about how well he/she can deal with conflict and resolution.

In 1974, Thomas and Kilmann (*Thomas and Kilmann, 1974*) published a book outlining a conflict resolution instrument (the *Thomas-Kilmann Conflict Mode Instrument – or TKI*) to help people better understand where they were placed in terms of their ability to deal with conflict.

The TKI identifies a person's behavior in a conflict situation, by looking at two dimensions (*KilmannDiagnostics.com, 2015*):

- *"Assertiveness – the extent to which the person attempts to satisfy their own concerns*
- *Cooperativeness – the extent to which the person attempts to satisfy the other person's concerns."*

Figure 4.1 shows the various, possible TKI conflict handling modes, mapped across these two dimensions.

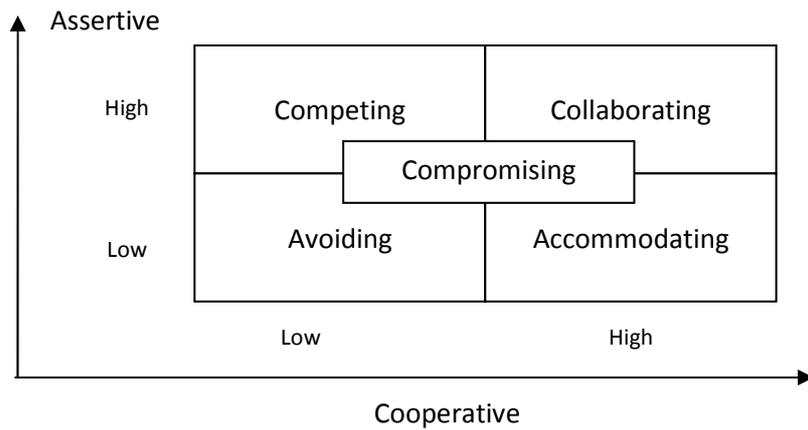


Figure 4.1 – TKI Conflict Handling Modes

Thomas and Kilmann described the various approaches to handling conflict in the following way (Kilmannagnostics.com, 2015):

"These two basic dimensions of behavior define five different modes for responding to conflict situations:

1. **Competing** is assertive and uncooperative—an individual pursues his own concerns at the other person's expense. This is a power-oriented mode in which you use whatever power seems appropriate to win your own position—your ability to argue, your rank, or economic sanctions. Competing means "standing up for your rights," defending a position which you believe is correct, or simply trying to win.
2. **Accommodating** is unassertive and cooperative—the complete opposite of competing. When accommodating, the individual neglects his own concerns to satisfy the concerns of the other person; there is an element of self-sacrifice in this mode. Accommodating might take the form of selfless generosity or charity, obeying another person's order when you would prefer not to, or yielding to another's point of view.
3. **Avoiding** is unassertive and uncooperative—the person neither pursues his own concerns nor those of the other individual. Thus he does not deal with the conflict. Avoiding might take the form of diplomatically sidestepping an issue, postponing an issue until a better time, or simply withdrawing from a threatening situation.
4. **Collaborating** is both assertive and cooperative—the complete opposite of avoiding. Collaborating involves an attempt to work with others to find

some solution that fully satisfies their concerns. It means digging into an issue to pinpoint the underlying needs and wants of the two individuals. Collaborating between two persons might take the form of exploring a disagreement to learn from each other's insights or trying to find a creative solution to an interpersonal problem.

5. **Compromising** is moderate in both assertiveness and cooperativeness. The objective is to find some expedient, mutually acceptable solution that partially satisfies both parties. It falls intermediate between competing and accommodating. Compromising gives up more than competing but less than accommodating. Likewise, it addresses an issue more directly than avoiding, but does not explore it in as much depth as collaborating. In some situations, compromising might mean splitting the difference between the two positions, exchanging concessions, or seeking a quick middle-ground solution.

Each of us is capable of using all five conflict-handling modes. None of us can be characterized as having a single style of dealing with conflict. But certain people use some modes better than others and, therefore, tend to rely on those modes more heavily than others—whether because of temperament or practice."

It is useful to understand one's own underlying predispositions to various conflict resolution approaches before attempting to resolve a serious dispute with a research student.

Disputes in postgraduate research can often arise from opposing parties taking intransigent views on a particular subject, without sufficient understanding of why the other party has a counter view. Moreover, once intransigent positions have been locked in and have been communicated, both parties in a dispute can unfortunately push the situation into a win-lose context, in which one party has to withdraw in embarrassment. The issue in supervisor-student conflicts is that the supervisor is in a position of authority and may win a conflict battle in the short term – but at what cost?

The only long term victory that a supervisor can ever truly win is the ongoing respect and cooperation of the research student to complete the research program to the highest possible standard. Everything else constitutes a shallow victory.

Chapter 9 of this book will deal with the issue of conflict resolution in more detail.