Technology for alignment of participants in nature conservation: a case study at the Southern African Wildlife College

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Alignment between the participants in any process allows for effective and sustainable utilisation of resources. When alignment lacks, resources are diverted to address issues that are peripheral to the central issue at hand. Ideally, all resources should be used for the main purpose of the exercise and not to deal with unnecessary problems. To illustrate the use of this alignment technology, it was applied to optimise both the participation of and benefit to the contributors at the Southern African Wildlife College (SAWC) as part of an academic course module. The alignment process ensures that each student becomes aware of his/her importance in the process and investigates the expectations of all the role players. The scene is set for answering Four Magic Questions (4MQ) and functions are developed for achieving the required outcomes. In order to stabilise the alignment, values management technology is used which enables the students to recognise and begin to deal with differing management styles.

Key words: awareness, expectations, donors, education institution, students, functions, value management, conflict resolution, learner support.

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Introduction

Post apartheid South Africa and the rest of the African continent can only succeed if all sectors of the population put their full weight behind development programmes. Implementation of these programmes means using human sciences technologies, (or in other words knowledge about human behaviour that has been changed into tools and skills), that are applied to solve practical problems and to extend human capabilities (Prinsloo 1993). The lack of competent and skilled manpower, and a focused mindset to match (Nasser & Vivier 1993) to allow full participation of people in change and development processes, places severe constraints on abilities to move ahead. Considering that 'Education more than any other factor determines the long term fortunes of a nation' (Sunter 1992), it is clear that Africa faces a serious problem unless the right capacities can be created.

Conservation agencies and the staff that man them, even if they are reluctant to admit it, think of the business and especially the industrial sector as 'the enemy of conservation principles'. At the same time they agree that it is nevertheless a prerequisite for conservation success to align with the business sector. They also agree that unless they create wealth amongst the people that live around conservation areas, it will be impossible to alleviate the pressure of the 'poor millions' on conservation resources. Conservationists and conservation agencies have to tighten their budgets and all agencies currently suffer the 'Angst' of trying to do 'too much with too little'.

The current lack of able and trained manpower that can mobilise communities and align them with the right conservation principles is a serious constraint. The place for conservation agencies to start is to align internal perceptions about the business world and its role in realising conservation objec-

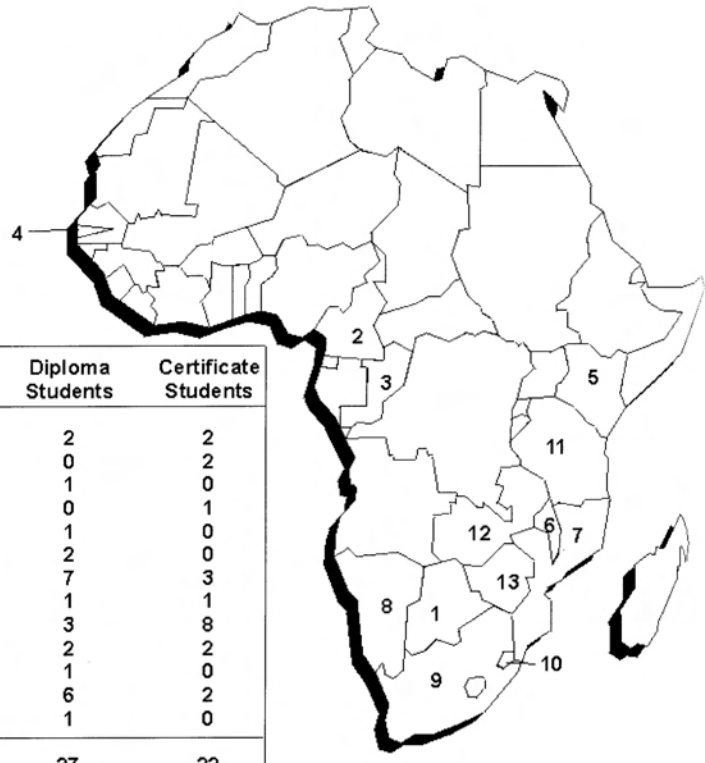
tives. To test the usefulness of the alignment procedures for both tertiary institutions and conservation in general, this case study focuses on the students at the Southern African Wildlife College (SAWC).

The SAWC students come from all over Africa. They are from different cultures, different countries and speak different languages and all are employed by different conservation agencies. This diversity of people needed to align personal goals and objectives with those of the SAWC, and their employers. If this is not achieved it is likely that an atmosphere of conflict and inadequate alignment between students and staff will occur which invariably results in the loss of thousands of training hours.

If the system used here was utilised by tertiary institutions we could solve:

— the inability of the current secondary and tertiary education system to deliver the required manpower into the market place;
— the brain drain where an unacceptably large section of the previously advantaged sector of the population leaves the country;
— the culture of non-learning that was propagated and developed in most South African townships as a political tool.

This study focuses on processes to resolve conflict and inadequate alignment between participants. As underlying assumptions about human nature create a climate and culture in educational institutions that impact on structures and behaviours, and affect the relationship between people (Tuohy 1999), these assumptions have to be revealed in the



Country	Diploma Students	Certificate Students
1. Botswana	2	2
2. Cameroon	0	2
3. DRC	1	0
4. Gambia	0	1
5. Kenya	1	0
6. Malawi	2	0
7. Mozambique	7	3
8. Namibia	1	1
9. Rep. Of South Africa	3	8
10. Swaziland	2	2
11. Tanzania	1	0
12. Zambia	6	2
13. Zimbabwe	1	0
Totals:	27	22

Fig. 1. SAWC students

alignment process. The application of alignment technologies to expose and address these assumptions is a prerequisite to the development of transparent processes to improve communication, systems and processes aimed at increasing the quality of life (Prinsloo 1993). This includes:

- technology to collect information and align perceptions regarding personal issues and expectations, the training institution, donors and employers;
- alignment technologies to create synergy that allows the effective development and deployment of manpower, and;
- values management systems (Graves 1974, Beck & Linscott 1991) to identify the values and management paradigms and systems acceptable to relevant parties.

The technologies described in this paper were assessed at the Southernern African Wildlife College (SAWC). The SAWC is a dynamic, recently established tertiary educational training centre, strategically placed on the boundaries of the Kruger National Park in South Africa. The SAWC sets itself the goal to be the best provider of environmental and protected area managers on the continent (Southern African Wildlife College 1999), clearly an outcomes based objective. Donors sponsor students from all over Africa (see Fig. 1) who qualify on the basis of prior experiential learning and who are employed. The unique modular approach followed in both the Certificate and Diploma courses cannot tolerate any loss of time or deviation from the programme that could be incurred because of conflict and inadequate alignment between students and staff. Similarly, no conservation agency can afford the interminable processes that occur between themselves and the community and business worlds. No further waste of time can be tolerated if we are to succeed and ensure the sustainable utilisation of natural resources.

This study focuses on the multidimensional process, i.e., align understanding, problem solving, outcomes thinking and values; describes ways of facilitating alignment between diverse people in a respectful manner while accommodating diversity, without accepting mediocrity; and utilises a process which facilitiates people to commit and invest psychologically in the outcomes and procedures in a natural fashion.

Outcome to achieve

This study reflects the use of human sciences technologies as methods of "doing, making and implementing" (Prinsloo 1993) change to the social fabric: in this case, the process by which systems and processes are set up that align and enable an institution such as the SAWC and its students to operate in synergy. This approach deals with potential problems before they become a major crisis (Tuohy 1999) and creates a system to manage processes before they get out of hand and slow down primary educational processes.

Methods

The group formation and alignment technologies used here are based on processes and systems used to successfully align communities and set up delivery structures for the implementation of the RDP and GEAR (Breytenbach 1993). The technologies are applied as part of a 'team building exercise' that is carried out at the SAWC as a standard process at the start of every year. The purpose of the team building exercise is to align the stakeholders into an acceptable and legitimate management system and process at the SAWC. All the available energy is then focused on learning and dissipation of energy on non-academic matters is prevented.

Awareness raising

Each individual has a role to play in the alignment process. To raise awareness of the importance of each participant, personal information is collected in a transparent process from the students. It should be obvious that they only share information they are willing and prepared to expose to the other participants. The context created by this sharing process, gives rise to expectations as to a possible future, and although it does not determine the outcome, it has a major effect on the results achieved (Touhy 1999). In order to ensure that the group moves towards trans-

Table 1
Personal profile

WHO AM I?
Name
Age
Birthplace
School career
Further education
Current employment
Current post and responsibility
What was the most interesting experience you have ever had?

parency and that an atmosphere of trust and acceptance is created, group members are asked to reveal a critical moment in their lives (Table 1). After sharing information, each participant identifies the critical information they want their fellow students to remember and explain why that information is so important to them.

Next we assess the 'pre-aligned personal expectations' of the students and their perceptions of the expectations of the SAWC, donor agencies and the students' own employers. An open-ended questionnaire is used. The purpose of each question is given in Table 2.

The perceptions of the expectations are grouped and discussed, thereby highlighting the difference in the expectations of the various role players.

Set the scene and build mental frameworks

The different perceptions that are identified during the awareness raising stage of the team building exercise set the scene against which the alignment process is driven. The students realise that they function in a minefield of differences and this helps them to consider all the various perspectives during the rest of the alignment process.

It is important to impart knowledge about the use of various thinking strategies as these build a mental framework that addresses the issues at hand. The *Johari Window*, the *Sand-in-the-box problem*, *Einstein's hour* and *Sunter's trumpet* are suitable technologies for this purpose.

Johari Window (see Fig. 3)

This well-known technology discusses each one of the panes that represent the manner in which a person is known to himself and others: the arena that represents knowledge known to everybody, the façade behind which we hide, the blind spot where others know our weaknesses that are unknown to us and the undiscovered pane in which undeveloped qualities lie. We use this technology to create awareness that we must increase the known aspects (arena) of each participant in order to be able to include all his known expectations in the alignment process. Analytic thinking skills and an atmosphere of trust are needed to complete this exercise successfully.

Table 2
Details on perceived expectations

Questions	Purpose
Why are you here?	Try to get an idea of the person's vision or dream.
What do you expect to get out of your training?	What is the outcome the person is expecting from the course? Is it promotion, enhanced abilities, friends or fun?
What does your organisation expect to get out of you when you go back?	Try to establish whether the person contracted with his organisation to deliver something. If so what? What enhanced abilities does the student's organisation expect of him, or did they send him here because he is difficult and his boss was just trying to get him out of the way?
What do you think the College wants to get out of the process?	The group must articulate what they think the College's expectations are.
What do the donors expect to get out of the process?	Why do the donors fund the training? To get tax rebates? To score brownie points? To make a difference? How are you going to meet their needs?

The sand-in-the-box problem (see Fig. 4)

The problem experienced in many discussions regarding development programmes, is that assumptions are made and solutions are given before the extent of the problem is properly ascertained and agreed upon by the involved parties. Although analytic thinking skills are needed, this technology addresses the issue in a light-hearted manner as problems are typically "solved" without all the relevant facts being known. In this manner the participants come to the realisation that "good" solutions are useless if insufficient information about the problem in hand has been gathered.

Einstein's hour

In preparation for the use of the Four Magic Questions (4MQ) (see section 3.3), the students are given information about how Einstein proposed he would use 60 minutes to try to solve a critical problem. This helps to create a mental framework that one must spend most of the available time (40 minutes) on gathering accurate information in order to examine and understand the problem, 15 minutes on reviewing it and 5 minutes on generating a solution. This process encourages the use of analytical thinking processes.

Sunter's trumpet (see Fig. 5)

The visual image of a trumpet gives people the mental framework to realise that a 'sound' emanating from a single person can be 'heard' by many people at a great distance. Thus long-term planning can open up a vast number of possibilities that makes it extremely difficult to stay focused on a specific issue. Discussing Sunter's trumpet (1992) is a method to show that one can decrease possible variations of the future. This process narrows down future scenarios to a common understanding of both current reality and the future.

The Four Magic Questions (4MQ)

As part of the process that ensures effective movement into the future, we need clear, efficient, applicable and shared descriptors of that future. VM Services (1995) have established a process that they call their *Four Magic Questions (4MQ) Process*, which allows one to achieve this objective effectively and efficiently. This technology is used to discover all the possible variables and expectations that are involved in the alignment process. The 4MQ process projects the students' thoughts into the future and links them to the outcomes that the SAWC wants to achieve. The 4MQ process also prevents present limitations from interfering in the thought processes, yet encourages realism.

Students are asked to supply extensive and complete lists of answers to the 4MQ (Table 3). In order to answer these questions, analytical thinking skills and disruptive thought processes are used.

The major and essential objective of this activity is to ensure that participants develop a common vocabulary and a shared understanding of descriptors of the future. The facilitator uses the answers to these questions to align understanding and perceptions. No statement is recorded until the group verifies that the concept is acceptable and everyone has the same understanding of the meaning. This ensures that the promoter of any point has to define the meaning of the words used. The facilitator therefore clarifies, and checks understanding with the group and seeks justification for acceptance.

Table 3
The Four Magic Questions (4MQ)

Questions	Purpose
What are the outcomes to achieve?	To identify the best possible results one would hope to achieve.
What are the outcomes to avoid?	To identify all negative results which are undesirable.
What resources do we have that could be used to achieve these outcomes?	List all relevant resources which can be commanded in the services of the outcome to achieve.
What are the obstacles we have to overcome?	List factors that must be overcome in order to reach the required outcomes.

Ranking of listed answers

Participants vote in order to rank the answers to each of the four questions. Each student is given several votes. They use coloured stickers, which are pasted on the flip charts behind the priority statements selected. This process allows the facilitator to verify whether:

- participants have aligned at all;
- priorities reflect the general discussions that took place. During the discussions priorities normally become apparent, and the ranking process verifies these priorities;
- the whole process is still on track, and;
- inter-group differences exist (different coloured stickers are allocated to different groupings. These groupings are decided on by the facilitator and could be age, sex, race, rank or experience related.)

Once the ranking of functions (see next step in process) has taken place, these data are also used to verify whether perceptions have moved and are aligned.

Develop functions

In order to achieve the outcomes to achieve and avoid, people have to go over into action. We need to develop activities or functions that will enable us to realise the required outcomes. The original lists of answers to the 4MQ process are used to develop functions, which reflect actions to be implemented. For example, if the outcome to achieve is 'an empowered student', some of the functions can be 'to train students', 'to source bursaries' and 'to provide accommodation'. All the functions are expressed as a short sentence consisting of a subject/noun and a verb.

The facilitator assists with the development of functions to ensure that all the outcomes to achieve and avoid can be realised. When repetition of functions occurs, only additional functions are listed. When additional functions are identified during the review of the questions regarding resources to use and obstacles to overcome, it indicates that outcomes were omitted which belong to the first two questions. These then have to be included. For example, if 'lack of money' is identified as an obstacle to overcome, a statement such as, 'we need to make money', or 'get a loan', must be added to the list of the outcomes to achieve. This process therefore uses the last two of the 4MQ to verify that all possible outcomes to achieve and avoid have been identified.

Develop basic or overarching functions

The generated list of functions is categorised under a few headings to produce a short list of basic functions. For example, all functions that relate to managing and preserving, such as 'manage fauna', 'conserve biota' and 'enlarge park' can be collapsed into a basic function such as 'maintain biotic diversity' or 'maintain ecosystem diversity'.

Then the final set of basic functions is rated in terms of importance by comparing each basic function to every other one in turn (example in Table 4). First, a decision is taken about which one of the two basic functions is the most important. Then the chosen basic function is weighted as follows: minimal difference; medium difference; and major difference

For example, in the second row of the table above function B is compared to the others. The other functions were considered more important than B in all instances. As a result, the total weight for function B is zero. This score places function B in rank position 5.

The major objective of the technology driven process described above is to ensure that total alignment is achieved between participants. The facilitator uses the process to explore understanding and consensus of the participants in relation to all the information collected up to this stage of the process.

Measuring values

Values determine the way we perceive and react to the world around us. We must, however, examine more actively the values that individuals hold, so that clarity can emerge and differences of value can be examined within a context where mutual respect and informed contact are built up (West 1993). Internal value systems, which focus on the meaning that individual members place on their work, as well as on the meaning, values and beliefs shared with other members of the group, lead to an exploration of 'why things are done this way around here' (Tuohy 1999). Values of students are assessed using the technology developed by Graves and Beck, as implemented by Sonnekus (1996), VM Services (1995) and Breytenbach (1993). This assessment determines which of the values systems each student either accepts or rejects. It was assumed that if a student scored higher than the population mean in regards to the value system, it would be deemed that that value system is either accepted or rejected by that particular student. The total number of students that either accept or reject a particular value system was then noted.

Table 4
Allocation of importance to basic functions

Basic Function	B	C	D	E	Tot	Position
Function A	A3	A3	A3	E1	9	1
Function B		C3	D1	E3	0	5
Function C			D2	E2	3	3
Function D				E2	3	3
Function E					8	2

Values alignment technology

As change implies development, it has to "be something the people themselves have decided they want and not something an outside interest group has decided. It should fit with the values of the people" (Mwosa 1987). The researchers have found the Graves Values Technology to be an extremely valuable system or technology within which to increase alignment, as it consults the people and implements solutions that are generated by them in an open and transparent fashion. Everything we do and the current 'value system or paradigm' we use to view the world, influences the way in which we perceive the world (Cowan 1988). We all look at the world through very different eyes, from behind very different 'value coloured spectacles'.

Graves in the late 1960s postulated the existence of two psychological components of behaviour:

— The first component relates to the 'problems of existence', or the 'world we find ourselves in'. This component represents eight identifiable external sets of 'enviro-bio-psycho-sociological conditions under which we find ourselves. All eight levels of existence may confront an individual within a single day! He/She may also find him-/herself existing comfortably within a single system, but has to work with people from all eight levels of existence.
— The second component refers to the 'means or processes' we use to cope with these different environments, referred to by Graves as 'coping means'. These are the methods, systems or thinking processes that allow us to cope with these different external problems of existence we are confronted with. Each level of existence requires a different coping mechanism, decision-making process or system (Cowan 1988).

If one uses Graves' system as a series of spectacles through which to view the world, it allows us to become *"New Paradigm Thinkers"* (Beck & Cowan 1996). A paradigm creates and erects definite and specific boundaries within which one perceives reality and functions in it. New Paradigm Thinkers have the following characteristics, they:

1. *Think in open systems* in contrast with fixed, ideal states.
2. *Integrate* natural differences in an *evolutionary flow.*
3. *Connect everything to everything* else in quantum.
4. *Act for the entire organism* in creating and distributing abundance.
5. See everything by *holographic scanning* or integrated vision before acting.
6. Employ a full range of *tailored problem resolution processes.*
7. Consist of *resourceful, fearless, tough, competent yet playful, caring* people.

By exposing people to new paradigm thinking with values systems as the overarching paradigm or technology, one empowers them to be able to recognise the pervasive paradigm of an organisation or an individual. In order to turn the values systems into a technology, the new paradigm thinker must be empowered to employ a full range of tailored problem resolution processes. The person must be able to recognise the level of existence, and then use the coping mechanisms suited to that system to solve problems.

Application of the Values Technology in our study

In order to explain clearly how the levels of existence are used in the values systems technology, a brief overview of the use of the value systems as developed by Beck and Cowan (1996) is useful. A brief overview is given in Table 5.

The way in which each of these values paradigms impacts on our perception, is influenced not just by the state of existence, but also by the specific situation. Different situations activate different coping mechanisms in a person. However, a person can use

Table 5

Different ways in which the future is envisioned and achieved by each value system

Value system	Problems of Existence	Healthy/Positive Expression	Unhealthy/Negative Expression	Approach to working
Beige: Immediate physiological needs	Maintaining physiological stability.	Authentic San Bushman - maximum coping within biological/ emotional constraints. Subsistence lifestyle.	Profound retardation, serious drug problems, extreme shock conditions, malnutrition (e.g. Vagrants)	Works for immediate rewards and wants immediate gratification.
Purple: Meeting group needs	Achievement of relative safety and true consensus.	Warm, supportive nests Ritual, tradition and magic. Healthy use of sangomas. Belief in animistic spirits.	Witchcraft, curses and spells. War muti to encourage conflict. Faction fighting, grudges.	Ritualised ways where all benefit: follow shaman/ chief, fear of magic forces.
Red: Psychological survival	Living with self-assertion and in control	Strong self-image. Expressiveness in sport, music, the arts. Breaking free from barriers.	Warlords, violence, hit squads, gangsterism. Lack of guilt, excessive bravado, exploitation of the weak.	Hands-on, tough; work controlled by firm, respected boss; trials and tests of worth; macho.
Blue: Order, meaning	Achieving ever-lasting peace of mind	Truth, honour, justice, discipline, work ethic, sacrifice for greater good. (Seen in the Zion Christian Church and some forms of nationalism.)	Rigid ideology, punitive holy wars, zealotry, depersonalisation of "enemies". Heavy - handed bureaucracy of which Apartheid is a classical example.	By-the-book conformity; rigid chain-of-commands ranks; sacrifice for future gain.
Orange: Adequacy, competency	Conquering the physical universe	Entrepreneurship, ambition. Desire to improve, to be the best. Attitude of thrive and help to thrive. Expand the economic cake. Produce the middle class.	Crass materialism, dishonest government and business, shady dealing. Contamination of the environment for profit. Destructive, competitive gamesmanship.	Competing to gain advantage and make things better; political, status driven and influence driven.
Green: Affiliation	Living with the human element and accepting human differences	Beyond materialism and dogma. Focuses on warm inter-personal relations. Promotes affiliation and personal growth. Supports acceptance and community. Softens edges in conflict. Genuine concern for others.	Naïve egaliterianism within moral crusades. Compassion becomes patronising contempt. Romanticises the underprivileged. Develops a narrow view of human diversity. Demands piety, harmony and understanding above all else.	Co-operation in common causes where all can contribute and share in mutual benefits.
Yellow: Self-worth	Restoring viability to a disordered world. (How can we live in a world with so many conflicting value sys-	Big-picture view of life systems. Values what is natural - less can mean more. Focuses on competency, responsibility and freedom of choice. Rejects status, conformity authoritarian structures. Information and knowledge-based deci-	Often drops, out, stays on sidelines or "does own thing" regardless. Shows little passion for others. Absorbed in self-interest. Pursues a variety of interests based on self- motivation. Often "lets things be" to excess.	Independent focus on integrative structures; Systemic thinking, functional outcomes, focus on competency.

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Table 5 (continued)

	tems and no assurance as to which is right? In fact we are sure all value systems are required!)	sion-making. Capable of fearless, creative problem-solving.	
Turquoise: World-worth	Accepting existential dichotomies (e.g. life is the most precious thing there is, yet my life is unimportant). There is a clear vision of an integrated planetary state.	In tune with large scale planetary concerns. Can "see" everything at once. Thinks in holographic mosaics. Respects all life - and the implicit order within the universe. Understands mega-systems in nature, social relations, evolution, business and the need to preserve Planet Earth for future generations.	Becomes abstract, other-worldly, tuned into frequencies and energy systems that transcend anything practical. Little use for people or community because of interaction with life forces in nature, through media and information networks. Often condescending to those who are not "tuned in".	Blending with holistic global networks to exchange ideas; experiential; seeks global results.

the same coping mechanism in different situations depending on the required outcome. In Table 5, we highlight the way in which each of the values coping mechanisms expresses itself in the definition of the future and the work situation. In line with Graves' approach we use the colour codes he allocated to the various systems for easy reference further in this article (Graves 1974).

The students are introduced to values management technology, which clarifies interactions between individuals, groups and organisations (Breytenbach 1993). A discussion of the various management styles as they present in the identified value systems, allows students

- to place the management style of SAWC within the value systems context
- to recognise the management style in their organisations of origin
- to develop management systems and structures that are aligned to the prevailing values as reflected in the expectations of the stakeholders.

Results and discussion

The results achieved by using these methods at the SAWC met the researchers' expectations and achieved the required outcomes. These are discussed in detail in the following sections.

Awareness raising and perceived stakeholder expectations

It was important to measure the understanding of all concerned at the start of the team building session and to raise awareness regarding the perceived expectations of the SAWC, the students, donors and employers.

Awareness raising

In a new situation, it is critical to go through a proper introduction phase. The first seven items of Table 1 revealed knowledge that was easily shared. It was non-threatening, yet established the value of each student within the group.

The last question accessed a deeper level of being, as personal experiences come to the

fore. It happens virtually without exception, even with teams that have worked together for many years, that information revealed by answering this question startles the group. Most of them are unaware of things that have importance to others. The facilitator helps the group to explore the responses received. Some may have hidden meanings in their replies and these meanings need to be brought into the open in the unthreatening atmosphere that is created by answering the first seven questions. For example, one person replied, *'When I was born'* to the last question, the hidden meaning was revealed when he/she confirmed *'I want recognition', 'I am important'* or *'I want attention'*. Someone else stated that his age was the most important thing he wanted the group to remember. The group could recall his age, and in doing so fulfilled his underlying need: *'I am the oldest and expect people to respect my age and wisdom'*. This reflected a cultural tradition of respect for elders.

This simple 'ice breaker' exercise created a suitable, trusting and open atmosphere, perfect for the introduction of the other alignment technologies.

Perceived stakeholders' expectations

People have different expectations about what they want to achieve, and what the future should look like. Even if they were part of an organisation that had a clear vision and mission statement with specific outcomes, the individuals' perceptions about the stakeholders' expectations differed. Virtually without exception, the rest of the group was unaware of these differences in perceptions.

Regarding the question, 'Why are you here?' the results captured in Fig. 2 reflect the perceptions of both the SAWC Diploma and Certificate students in February 2000. Both groups indicated a need to increase their knowledge and attain personal goals in various facets of their lives. Figure 2 highlights the differences between the perceived needs of the two groups. This emphasises the need for an alignment process within the student body itself.

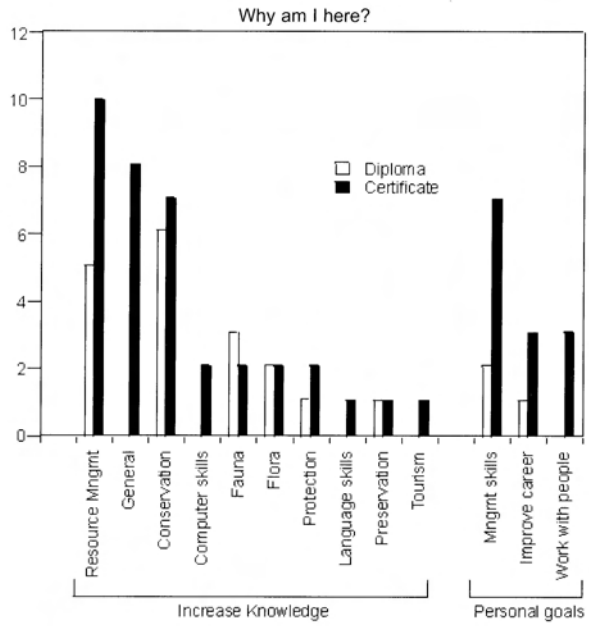

Fig. 2 Reasons given by students for coming to the SAWC.

The replies to the question: 'What do you expect to get out of your training?' are seen in Table 6. Enhanced performance and an increase in knowledge dominated the response. This clearly relates to the responses reflected in Fig. 2.

However, not only the students have expectations. The students' employers, the SAWC, as well as the donors have expectations. Perceptions about these stakeholders' expectations were explored, as were the students' potential contributions towards meeting these expectations.

Students believed that a major requirement of their employers was that they transfer the knowledge they acquired to both the organisation and communities surrounding the parks (Table 7). When questioned, it was interesting to note that none of the students had actually discussed or tried to identify what the real expectations of their employers were. The data therefore reflected students' perceptions of what they believed their organisations would expect of them. These perceptions might be completely off target.

Table 6
Students' expectations of their training at the SAWC

I expect to get	Diploma	Certificate
Information and Knowledge	10	12
Enhance performance	5	10
Practical skills	2	7
Obtain qualification	0	5
Ability to transfer skills	2	3
Earn a better salary	0	2
Experience in Community Based Conservation	2	1
Recognition	1	1
Source funds	1	0

An assessment of the students' perception of the SAWC's expectations of the year's training (Table 8) revealed that Diploma students saw skills transfer and attainment of the SAWC mission as the most important outcomes to achieve. Certificate students on the other hand, also included the attainment of improved conservation as one of the outcomes to achieve. This showed the non-alignment that existed, even between the student groups.

During the discussions held with the Diploma students (the first group to go through the alignment process), it became clear that donors were perceived as agencies *'that should fund training'*. Based on this experience, Certificate students were asked to note down their perceptions of the donors' funding requirements. Table 9 shows these results.

The alignment process addressed these perceptions, or the lack of them (as seen in Fig. 9). During the discussions it became clear to the students that donors typically are large organisations who support nature con-

Table 7
Students' perceptions of employers' expectations

Organisation expects	Diploma	Certificate
Obtain qualification	0	4
Transfer knowledge to:		
Colleagues	8	2
Communities	2	7
School children	1	2
More knowledge and skills on how to:		
Improve work performance	4	8
Manage a protected area	0	8
Assist to achieve organisational goals	1	5
Conservation	2	5
Natural resources	3	4
Report back	1	4
Better tourism skills	0	1
Proposal writing	1	0
Waste management	1	0

Table 8
Students' perceptions of SAWC expectations

Perceived SAWC expectations	Diploma Students	Certificate Students
Wants to provide students with:		
Motivation	1	0
Skills	10	14
Wants to achieve the SAWC vision and mission	5	0
Wants access to donors	0	2
Wants to test ability to transfer knowledge	2	3
Wants to advertise the SAWC and earn recognition	3	5
Wants to build people networks	0	4
Wants to transfer skills to students on:		
Management	3	3
Practical skills	2	2
Needs assessment and analysis	1	
Environment	0	10

Table 9
Students' impressions of what donors want from the training process

What do the donors want out of their funding process?	Certificate Students
Improve African countries	5
Students should learn well	5
Students should pass exams	5
Transfer knowledge gained	3
Understand what conservation means	3
Know that their money is well spent	2
Better managers	1
Promote transfrontier reserves	1
Report back in writing	1
Support from students	1

servation. Further, it showed that students did not know about the secondary gains for donors. No student identified a need to increase profits, save money, increase sales or support nature conservation as possible organisational goals that motivated donation. Similarly, the United Kingdom government can be seen as a donor to grant maintained schools. This implies that the United Kingdom government also "believes that the conferring of 'Grant Maintained' status on schools will heighten their accountability and simultaneously encourage them to be both more efficient and effective" (Fitz *et al.* 1993), however, without this actually happening. This is a parallel example of the situation at the SAWC. Students need to grasp the fact that lack of efficiency, effectiveness and accountability from their side will disenfranchise donors. This lack of comprehension can be expected, since divergent and unaligned perceptions represent a standard condition amongst stakeholders before the alignment process is conducted, and the absence of Grant Maintained schools in southern Africa has not helped students to be aware of these secondary requirements. Generally, except for those tasked to do so, staff in any organisation rarely study and understand the needs and outcomes expected by the stakeholders or donors in their industry.

The analysis and discussion of the written contributions from Table 2 show that students held divergent opinions and did not have a clear understanding of their own expectations, those of their organisations, the college or the donors. The next part of the process required that the group involved in the team building exercise clarified and aligned perceptions on these issues. This major outcome, namely to ensure that the management systems, processes and student expectations were integrated and aligned, is detailed in the next section.

Alignment process

The alignment process requires the facilitator to use an information gathering and sharing process that sets the correct mental framework. The outcome is an atmosphere that ensures that the students engage in creative thinking processes during vision sharing. There must, however, be no risk of personal ridicule. Each student must accept responsibility for making positive contributions.

We used a few quotations from famous people to develop creative tension within a specific context. These follow below with a brief discussion and rationale.

— 'Whatever you can do, or dream, you can - begin it. Boldness has genius, power and magic in it.' Goethe.

This quotation encouraged people to share their dreams and focused attention on the need to act boldly and implement their dreams.

— '…The real voyage of discovery lies not in seeking new landscapes, but in having new eyes.' Marcel Proust.

This quotation helped students to look at the world with new eyes. This was akin to using a pair of spectacles to see clearly. The clearer vision that resulted allowed them to get a different perspective on life, each other, the college, the donors and their employers.

— 'Significant problems cannot be solved at the same level of thinking we were at when we created them.' Albert Einstein.

This comment sensitised the group to the fact that the alignment process may require solu-

tions from an unfamiliar level of thinking. Moving into uncharted waters creates discomfort. This also happens during the alignment process.

During the alignment process, these quotations served as a reference when the students needed to apply these insights.

Sharing perceptions

The students were sensitised to the fact that the alignment process required them to share perceptions at personal levels. This is something to which most people are not accustomed. Perceptions are often thought of as 'non truths' that do not reflect actual reality. To the contrary, perceptions represent current reality to the individual who holds the perception. Discrepancies in perceptions reflect the various current realities and these discrepancies impair the alignment process. Alignment was achieved through sharing and clarification of all the possible expectations and perceptions of expectations.

Ensuring openness

Experiences, knowledge, values and prejudices form perceptions. The Johari Window (Fig. 3) was used to explain to the students why openness is essential. The size of the arena in which the group operated was determined by shared group perceptions.

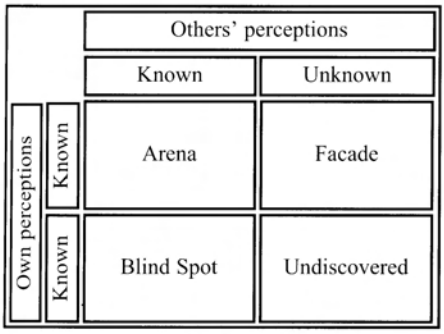

Fig. 3. The Johari Window

The larger the arena became, the larger the operational area in which the students operated became. Effectiveness also increased as the arena increased. Decreasing the size of the other three areas increased the size of the arena. Sharing knowledge about expectations and potential outcomes and clarifying what was meant, helped to achieve this goal.

The size of the facade decreased when students shared knowledge about their perceived expectations that they had not previously revealed to each other before. It was startling to note that even critical expectations and perceptions had not been shared before. It was as if the students had not perceived that this information was important enough to share!!

The size of the blind spot decreased as people revealed their hidden perceptions about individuals. This was particularly effective in the diverse group where people held stereotypical views of cultural groups. The revealed knowledge increased the size of the operational arena by heightening the awareness of the perceived expectations that were present in the group.

The size of the undiscovered area decreased as the group discovered perceptions and abilities of which they were previously unaware.

When setting up systems and processes it is critical to collect and source information that will increase the size of the operational arena. Major dysfunctionalities occur when we assume that perceptions are aligned. This happens when the stakeholders assume they are all playing in the same arena, only to discover, when it is too late, that they are on different playing fields aiming for different outcomes while playing with different rules and equipment. Shared information does not lead to shared understanding. Gostelli (1995) uses the example of the instruction to a tennis player to 'watch the ball!' properly and comes to the conclusion that:

— People do not hear things until they are ready for them. (In the case of the tennis player, it took two years before the student understood what the instruction

meant.)
— People firmly believe that they are doing things, which they are not. (The tennis player firmly believed that he was watching the ball effectively, when in fact he was not.)
— Information is meaningless (and valueless) until it is experienced. (The tennis player only understood the instruction once he could watch the ball effectively and experience what it was to watch the ball properly.)

In this instance, the shared information allowed the students to realise that the SAWC, their donors and employers were stakeholders that must be taken into account when determining the outcomes to be achieved.

Understanding the situation

People almost invariably generate solutions for problems before they clearly understand the problem they are trying to solve. The students were sensitised to this by exposing them to a very simple problem, which they had to solve (Fig. 4).

The instruction was "How will you put the sand in the box?" Solutions were immediately offered, such as use your hands, use a spade, a wheelbarrow or turn the box over and put it over the sand. Neither of the groups collected and collated enough information about the sand and the box to define and solve the problem effectively. The groups moved towards scenario type solutions, i.e. 'if … then … '. When they ran out of potential solutions the facilitator supplied full information about the situation and it was immediately clear to the groups that the proffered solutions were inappropriate. For example, the SAWC students were informed that the 10 grams of sand is in a cave in Morocco beneath a mother leopard with cubs. The box is a matchbox that was glued to the top of an exposed rock on the lip of the Victoria Falls.

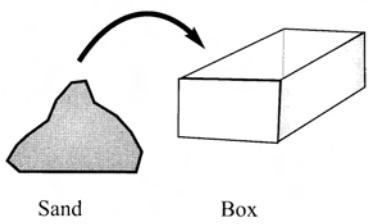

Fig. 4. The sand-in the box problem

From this simple light-hearted exercise, it was obvious that suitable solutions could only be developed after the problem had been properly described.

Einstein's hour

The group was also exposed to the way in which Einstein allocated activities to a problem, which had to be solved within 60 minutes. Einstein showed that one needs to spend some 40 minutes in exploring the situation and defining the problem, some 15 minutes in reviewing potential solutions and options and only 5 minutes in developing the final solution. This information was then related to the-sand-in-the-box information gathering problem as well as the need for openness as illustrated by the Johari window.

The students concluded, that most of the problems encountered at the SAWC in the past could be attributed to the fact that not enough information had been collected. The divergent positions between stakeholders reflected this fact. In future, problematic situations need careful analysis by spending time on an accurate description of any existing problem.

Scenario planning

Sunter's (1992) trumpet (Fig. 5) illustrated the need to get a common understanding about outcomes to achieve. This decreased the possibility of misunderstanding and enhanced the alignment process.

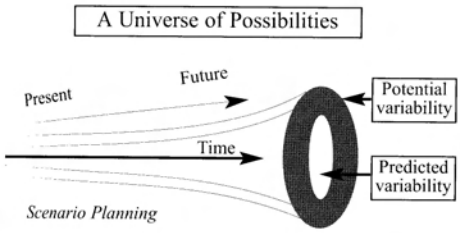

Fig. 5. Sunter's Trumpet

One way to plan a scenario is to share as much information as possible about the potential futures. This decreases the possibility of error by confirming that there is a common current understanding of both the present and future. The 4MQ system maps the way forward. It is an extremely suitable technology to use at this stage of the alignment process.

Mapping the way forward

Participants answered four questions (4MQ) in order to develop clear and realistic shared descriptors of the future. Shared understanding creates alignment. At the SAWC for example, the group listed the 'maintenance of species diversity' as a major outcome. The group's perception was that this meant 'mammal diversity', because in their reserves they only managed and monitored mammals. It was only when the facilitator worked on common understanding that it became clear to the group that biodiversity is a far more inclusive concept and can even include parasites and disease bearing organisms.

This illustrates that people with an in-depth knowledge of the topic under discussion need to be part of the facilitation team. Exposure to subject matter is therefore critical. Diploma students, now in their second year at the SAWC, generated far more responses than Certificate students did to all the questions due to their greater knowledge (Fig. 6).

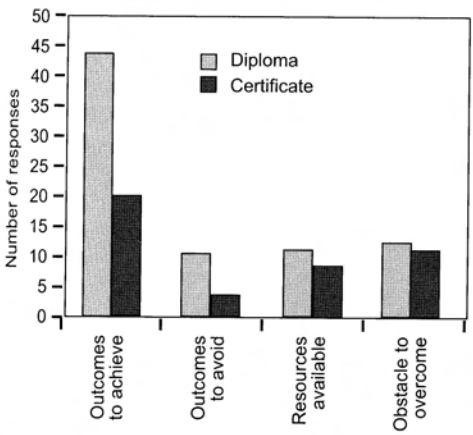

Fig. 6. Student responses to 4MQ

Responses to 'What are the outcomes to achieve

The major outcomes required from this exercise are clear statements of where the individual, group or organisation is heading. The process places no mental limits on the possible outcome. In fact, the questions generate substantial creative tension and a free flow of ideas. The outcome is therefore always a very positive statement of the future. One should however not create unrealisable dreams. The facilitator must ensure that the group agrees that the envisaged outcomes are achievable.

The groups ranked the listed items in terms of importance. As an example, of the total list of items, only those that received more than four votes are listed below in Table 10.

All items in the lists were categorised and both number of items listed and votes for items in each category were calculated. Development of skills and solution of management problems dominated inputs from the students (Fig. 7). Figure 8 shows that skills and development of sound management were ranked as the two major critical outcomes to be achieved.

In terms of outcomes to avoid (Fig. 7), it is interesting to note that the students identified only skills and management issues for consideration. It is again clear that the Diploma

Table 10
Responses with more than four votes listed under, 'What are the outcomes to achieve?'

Outcome	Votes	Dipl = 1 Cert = 2
Good results from students	13	1
Address problems with solutions that are accepted and implemented	11	2
To get experience to move and improve protected areas to reach world heritage status	9	1
To have knowledge that can be implemented	8	1
Develop acceptable accommodation allocation systems	8	2
To solve environmental problems	7	1
Source enough finances to achieve required outputs	7	2
Satisfy employees at home	7	1
Acquire more conservation skills	6	2
Provide skills and knowledge which can be implemented in own organisation	5	2
Transparency regarding expenditure of donors' contributions	5	2
Satisfy donors	5	1

students were extremely concerned about the management issues. This reflected the issues and problems encountered in their first year. We were therefore again sensitised to the fact that non-alignment of perceptions and processes had been a major issue the previous year.

What are the resources we have available?

The students listed all standard resources such as students, the SAWC, some funds, quality trainers and others. The responses were categorised into five classes:

Students All resources that relate to the students and their capacity to deliver.
SAWC All resources that relate to the SAWC and its staff.
Materials All resources that relate to study materials
Money All resources that relate to financial issues
Others Other issues.

The number of items listed within each of these resources is given in Fig. 9.

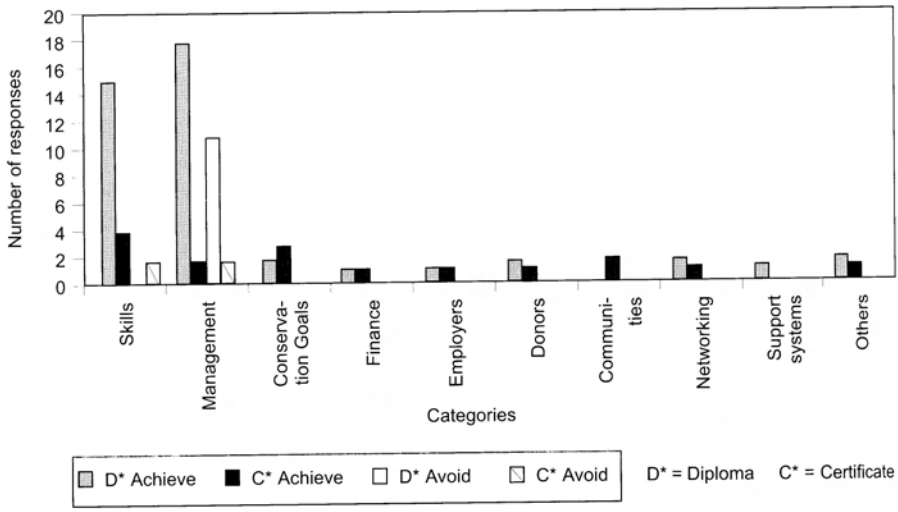

Fig. 7. Number of items listed by students in response to the questions 'what are the outcomes to achieve and avoid?'

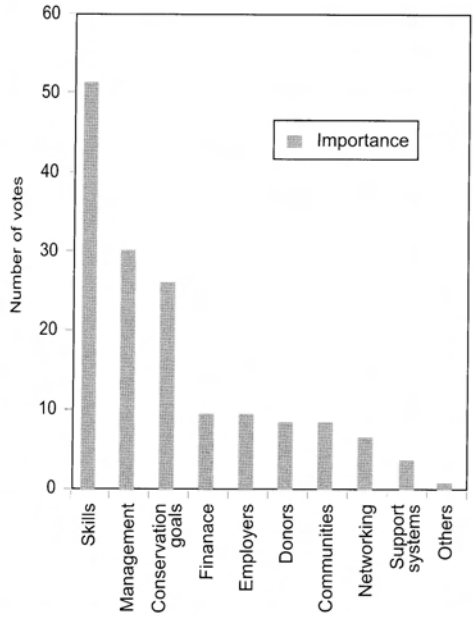

Fig. 8. Importance rankings for outcomes to achieve.

What are the obstacles we have to overcome

The group identified communication and management issues as the major obstacle to overcome. Once again, Fig. 10 shows that management is a major issue. The students saw and perceived this to be the most important obstacle that they had to overcome.

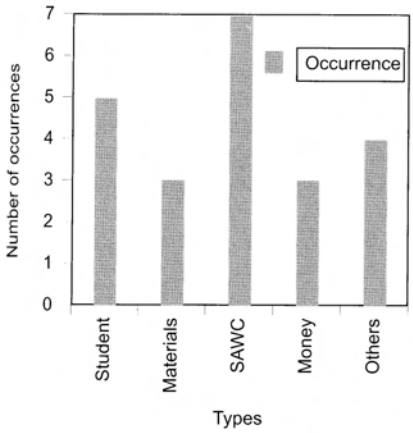

Fig. 9. Major resources identified.

The 4MQ process therefore allowed us to achieve clarity about concepts and their meanings within the group. We also managed to align perceptions within the group on the information collected and collated.

Functions

The previous process therefore aligned concepts, encouraged creative thinking and created mental frameworks. The major outcome of this part of the alignment process is to ensure that the importance of certain activities is highlighted and that consensus is achieved on which of the functions (activities), are the most important.

Using the 4MQ data, functions were compiled to determine what the SAWC and the students had to do in order to ensure that the outcomes that had been identified were achieved. At this stage of the process, the students were all participating freely. The facilitator ensured that the group obtained consensus regarding the concepts and their embodiment before any functions were finally accepted.

The process therefore drew the participants from a mental position of 'potential dreams' to the reality of 'implementation'. The facilitator, however, had to ensure that the group did not get involved in too much detail and that they stuck to 'what do we need to do', rather than 'how to do'.

The two student groups identified nearly 400 functions for implementation. From these, the students identified basic functions for implementation (see Tables 11 & 12). Alignment between the two groups was clearer now than previously. Both groups of students identified training/enablement as a basic function. Both also listed this as the most important function at the SAWC. Both the groups also rated the establishment of sound management structures as important.

The comparison of the two sets of output (see Table 13) illustrates that alignment was achieved in spite of the two groups going

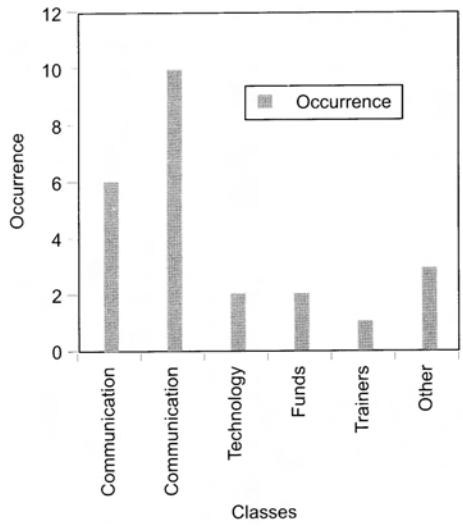

Fig. 10 Major obstacles to overcome.

through the process separately. If one compares the two outcomes, it is clear that both groups perceived enablement, resources and a quality environment to be of critical importance.

The Diploma students listed the attainment of conservation goals and maintenance of ethics as an additional basic function and gave it a high importance rating. The Certificate students on the other hand identified the need to build networks (Link stakeholders) as a basic function but did not allocate any points to this activity. The process used by the researchers therefore managed to align thinking and perceptions amongst the two groups of students.

Basic alignment with SAWC needs was also achieved. The two groups accepted that rules and adherence to rules are of paramount importance. The fact that the creation of student and management structures is critical was an outcome we therefore needed to achieve. Moreover, the students came to realise that they could not abdicate responsibility to contribute to the successful management of the SAWC. Students and SAWC staff agreed to pursue the process and to establish the required structures and processes.

Values and value management technology

At this stage of the process, groups were aligned in terms of objectives and actions to be taken. It was critical to now implement the functions that were identified in the steps above. The groups knew and agreed that these activities would lead and take the group to the clearly aligned and described future. Alignment, however, will normally disappear rapidly during implementation unless a way of stabilising perceptions within a system or process is found.

Generally, the whole process tends to collapse during the implementation phase, since groups fail to find an acceptable implementation process. During implementation each person's values and value related perceptions come to the fore and render the alignment process null and void. It is easy to agree about a jointly perceived future. When you have to attain that future, processes and perceptions virtually outside of your control intervene and the agreed to future begins to slip away. For example, the value system of a mafia gang boss, or a person with an Idi Amin value system, clearly dictates that he/she must be in control and those that do not listen and obey are swept away with disdain. Even if they agreed with a person with a Mother Theresa type value system about the future objectives, when implementation time arrives, personality or value systems clashes lead to the decay of the agreed to perceptions of the future.

Table 11
Basic functions and their ranking as scored by the Diploma Students

Function	B	C	D	E	Tot	Position
A Enable people	A3	A2	A3	E1	8	1
B Improve resources		C3	D1	E3	0	5
C Provide management			D2	E2	3	3
D Create quality environment				E2	3	3
E Ensure wise resource utilisation					8	1

Table 12
Basic functions and their ranking as scored by the Certificate Students

Function	B	C	D	E	F	G	Total	Position
A Provide appropriate training	A2	A2	A1	A1	A2	A2	10	1
B Implement effective management		B2	B2	B1	B2	B1	8	2
C Implement student structure			D1	E3	C2	G2	2	6
D Ensure good health				E3	D2	G1	3	5
E Source finance					E1	E1	8	2
F Link stakeholders						G1	0	7
G Create learning environment							7	4

Table 13
Comparison of basic functions

Diploma Function	Percentage of Diploma Points	Certificate Function	Percentage of Certificate Points
Enable People	36%	Provide appropriate training & Create a learning environment	48%
Improve resources & ensure wise resource utilisation	36%	Source finance	21%
Provide management	14%	Implement effective management & Implement student structures	26%
Create quality environment	14%	Ensure good health	8%
-	-	Link stakeholders	0%

How do we use the values system and coping mechanisms to retain alignment during implementation?

The major objective of the process is to assist and equip people with a technology that allows them to identify the value system required to realise different steps in the implementation process and to optimise achievement of the right outcomes.

If one learns how to recognise the specific enviro-bio-psycho-sociological condition which confronts you, and one uses the right coping mechanism, it becomes relatively easy to adapt to situations and cope with change (Cowan & Beck 1989). This is not easy for many individuals. In some instances, 'bad experiences' have created prejudices and mental blocks. Most communities and individuals that have lived under colonial or dictator rule, tend to have a prejudice against rule based (blue) and profit based (orange) systems because blue was perceived to be top-down and orange profited at their expense. As individuals, we may therefore reject certain coping mechanisms as an acceptable mode of behaviour as we do not want to repeat the mistakes made at our expense. Once people are aware of the different levels of existence and the coping mechanisms required to handle these situations, they can work on this aspect and are able to overcome the specific prejudices. Awareness of self is therefore a key ability to use during the stabilisation of the alignment process.

Existing Values and Management Systems

The implementation of a management system is simple if the system is in harmony with the prevailing value systems in the organisation. Before adopting a system, it is therefore critical to assess the prevailing values in the organisation. As Mwosa (1987) states, "The overall need is for managers who can develop systems that are responsive to and congruent with the values, needs, and resources of their respective cultural areas." The management system must be congruent with the prevailing value systems of both the organisation and the participants. If the management system and processes are not in harmony with the predominant values, people resist moving from the present, experience a sense of loss and fear the future (Tuohy 1999). This sparks involuntary conflict and causes loss of energy.

The above scenario, indicates that prevailing values are not in harmony with the required organisational value system, thus requiring a process of alignment. This is a prerequisite for organisational success. As West (1993) states, "If we are surprised that the values we thought were absolute appear no longer to have power, it is because we have neglected ideas as being as important as actions." The awakening to the existence of other values systems and the mobility to work within these other values systems is essential for stabilisation of alignment. Fixed and rigid ideas that attach to ways of doing things must be replaced by a constant openness of mind, which is adaptable without losing sight of value-directions (West 1993). This need not mean that the individual sheds his existing value system. This does, however, mean that he/she consciously identifies and recognises other value systems and aligns his/her coping mechanisms in order to achieve success.

In order to attune the organisation's value systems with that of the group, we use the Values Management Technology. Experience shows that all effective institutions operate within blue rule driven and rule based systems. Students in southern Africa find it difficult to fall into the routine top-down management regime that is standard fare at south african tertiary education institutions. The Values Management Technology positions students to cope with the alignment of values and existing management styles of their institutions.

We used the Graves Values System (Graves 1974, 1981) to ascertain what the standard values of students at the College were. The SAWC would be able to implement blue 'by-the-book-conformity' effectively, if student were partial to this system. The researchers, however, predicted that the inherent problems at the College were most likely attributable to the fact that most students rejected this value system. Figure 11 shows the number of students that reject or accept certain of the value systems. The results of the values test show that none of the students accepted the blue system. In fact, they all rejected it. A typical blue management system, perceived to be top-down, was not acceptable to the students. On the other hand, the data also showed that the only viable system on which to base a management system for the SAWC was the purple value system. This was the only system at the SAWC for which there existed universal acceptance and no rejection (Fig. 11).

The discussion that followed clearly outlines an approach, which could be followed by both the SAWC management and other tertiary education institutions in South Africa. Macpherson (1992) refers to "meta-values" of an educational polity that are representation, conciliation and wise government with the interest of learners and knowledge production paramount. This only happens "if managers are prepared to share positional authority and focus attention on consequences at all levels" (Macpherson 1992).

The development of management systems and strategies

Figure 11 above shows that the students totally reject two of the value systems, namely orange and blue. Trying to manage them from these perspectives could be disastrous.

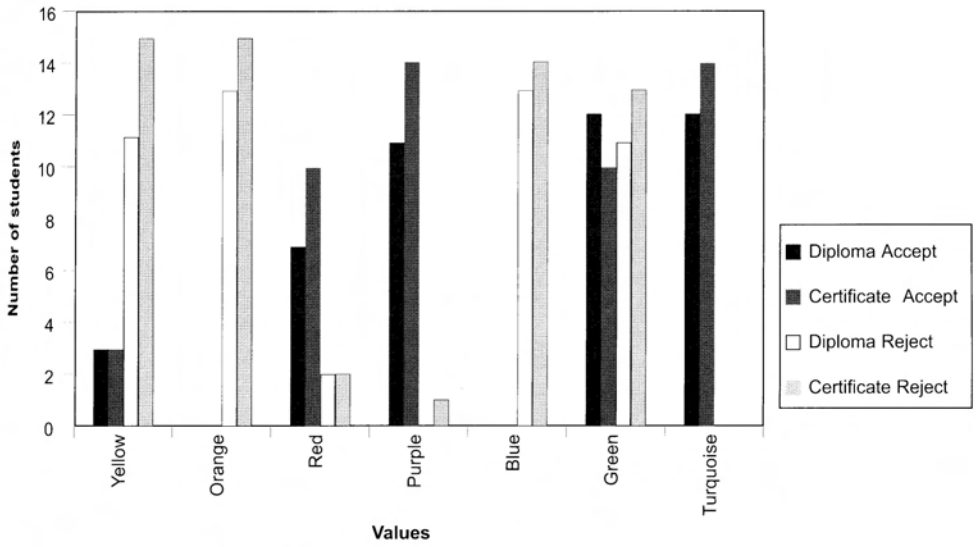

Fig.11. SAWC students preferred values systems

However, SAWC is not a profit making business and does not have a problem with students who reject the latter value system. On the contrary, in this instance the SAWC and its students are aligned.

The blue value system does, however, present a problem. The SAWC is managed along the lines of the blue authoritarian system, typical of tertiary academic institutions. A by-the-book conformity is expected. There is a chain-of-command that expects students to sacrifice now by studying hard in return for future gains (Table 5). However, the SAWC cannot afford to change its management system completely. An institution that does not have clear guidelines for its students cannot be successful. Our data show that the SAWC should be aware of the fact that top-down management according to fixed rules will cause rebellion (red value system behaviour) and a breakdown of authority. These negative elements are embedded in the red value system, which is present in the students (Fig. 11). The resulting anarchy would destroy the ability of the SAWC to deliver on its vision and mission and this needs to be prevented.

In turn, the students were given insight into the values systems of the SAWC. It became obvious to the students that the actions of the management team and the college rules placed them squarely in the blue box. It also became clear to the students that since they themselves rejected blue operating systems, they experienced the top down imposed rules as red. They recognised that they as students accepted the red value system. This implied a natural response would be to react in red that would lead to anarchy. We hope that fore warned, is fore armed!

The students all accepted the turquoise; green and purple value systems (Fig. 11). As the acceptance of the green value system was balanced with an equal amount of rejection it would be unwise to build a management system within a green value system. The turquoise value system was accommodated by the SAWC as it blended with international holistic global networks and exchanged ideas with many experts in the field. The variety of experts, who function as lecturers for the various modules, proves this approach. The courses were also presented in an experiential manner, and global inter-

nationally applicable results were achieved. This presentation mode is in line with both the expectations of the SAWC management directive and is also in line with the turquoise expectations of the students.

The purple value system is the only 'safe' value system that could be used to resolve the pending management problems at the SAWC. Students all accepted the purple value system with only one student rejecting the system. The same student however, preferred the yellow value system and hence was willing to accept logical solutions to problems. A solution, even if based in purple, would be logical and therefore acceptable to this student.

The researchers suggested that a purple implementation process be designed to allow the SAWC to implement an acceptable blue management system. Purple would accept a fully participative management and control system, provided they were part of the blue design team. Consensus needs to be maintained continually, especially about the rules. This is the only way to ensure the authority of the SAWC management team.

In line with this thinking, the researchers suggested to the college that the students select a Student Management Team (SMT). We suggested that the students and the staff negotiate the process for the selection. This was accepted and the selection gave positions to the strongest individuals in both the Certificate and the Diploma class. We recommended that the student body in association with the SAWC management team review all the rules.

The SAWC and the students would then jointly set up a system, which would allow students to have direct input into the SAWC management process through designing their own rules. The students therefore would not experience this as a top down imposed system. All SAWC student problems would be channelled through the SMT to the management. Possible solutions would be discussed openly in meetings and members of the SMT would give replies to the student body.

We predict that if this open, fully participative rule design process is not followed, similar problems to those encountered previously will result.

Summary

The alignment process is not easy. It takes skill and experience to bring about alignment between various stakeholders. During the awareness-raising phase each individual is invited to buy into the process. Not only are the individual students convinced of their personal importance in the process, but they are also given the opportunity to consider the other stakeholders' expectations regarding the present situation. This clarifies the existing situation to them as they realise how disparate the expectations are.

This is followed up by group work that builds the necessary mental frameworks to be able to deal with the alignment process. As part of the process to ensure that the college can move into the future effectively, we need clear, efficient and applicable descriptors of that future. The major outcome to be achieved is a clear statement of where the individual, group or organisation is heading. Values Management Technology is the process that we have found to give the best results. The process places no mental limits on the outcome. To the contrary, these questions result in substantial creative tension being created and the outcome is always a very positive statement of the future. The Four Magic Questions (4MQ) reflect a process, which gives us clear, efficient and applicable descriptors of the future towards which the stakeholders want to move. It also gives us ranked functions that have to materialise in order to achieve our outcomes.

The second phase constitutes the measuring of existing values by using the Values Test of Graves and Beck. The results of the test gave the researchers a good idea of the values systems, which were accepted and rejected in the group. This inside information was shared with the students but only once they

had been given the background against which to understand the scores. Not only did they understand themselves better, but they also had information that was applicable to the college management system as "changes in values must be set in their context of movements in social arrangements and assumptions" (Kogan 1985). This insight allowed them to deal with the level of existence that was present within the College. College management was also given insight into the overall profile of the students and this allowed them to adapt their management style.

Conclusions

Technology is defined as knowledge applied in a useful fashion. Just as knowledge about coal, steel, viscous fluids and production and management systems can be used to develop a useful product such as a ballpoint pen, so we use knowledge to design technologies to assist human beings to interact effectively. This paper highlighted how such a technology was utilised to align thinking at the SAWC.

The same technologies have been used frequently to align groups with vastly divergent objectives and goals. We have used the technologies to align:

— staff members from conservation agencies with the business world;
— rural disadvantaged community members with 'conform to rules processes' especially valuable if one thinks of the current crime and farm invasion situation that prevails in Africa;
— groups at 'war' (peace structures in South Africa were aligned);
— or in serious political conflict (AWB, NP, Inkatha and ANC supporters at the height of the conflict);
— participants in community development processes; and
— property developers and their opponents.

We therefore suggest that this process lends itself immanently to align conservation agencies with their neighbours and natural resource utilisation initiatives. Conservation, or the wise sustainable utilisation of natural resources, requires people that hold divergent opinions and positions to align. Most conservation agencies find it ethically easy to utilise a certain resource, e.g. many African National Parks utilise and manage their game populations whilst Forestry utilises plant or tree populations. Both groups do this in a totally sustainable fashion. However, these organisations contradict each other: National Parks claim that one should not be allowed to utilise plant resources, such as kiaat trees, whilst Forestry claim that one should not cull Bushbuck, indicating a lack of alignment regarding conservation ideals.

We firmly believe that utilisation of the technologies described here, allows people to explore concepts and ideas, and simultaneously achieve alignment. If conservation is about the wise sustainable utilisation of natural resources (air, water, rock, soil and living organisms) this technology allows one to develop clearly defined processes and systems acceptable to all interested and affected parties, to achieve this goal.

The technology for alignment has reached its required outcome. It has effectively and efficiently provided solutions for an atmosphere of conflict and inadequate understanding between students and the staff at the Southern African Wildlife College.

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