

INTERNATIONAL BACCALAUREATE

International Baccalaureate Career-related Certificate (IBCC)

DRAFT GUIDE

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Introduction to the IBCC

“Secondary-level education should provide effective preparation for those proceeding to academic or professional tertiary education as well as for those entering the world of work either as trainees, wage employees or as self-employed entrepreneurs, while inculcating the social skills for productive and peaceful life in today’s interdependent communities. Such an education must necessarily comprise a harmonious balance of academic disciplines, generic practical and social skills and civic responsibility”. (UNESCO 2005)

The International Baccalaureate Career-related Certificate (IBCC) was developed to address the needs of students interested in pursuing a career-related education at the upper secondary school level. The IBCC offers a learning and assessment programme that promotes access to an IB education, school retention, responsibility for one’s own actions, skills development, reflection on experiences and self esteem through meaningful achievements. A key feature of the program is that it provides flexibility to allow for local differences.

The International Baccalaureate Career-related Certificate provides the basis for:

- effective participation in the changing world of work
- improved mobility and flexibility in employment
- additional training
- further education
- life-long learning.

The IBCC includes three components.

1. A career-related/vocational course of study determined by the school.
2. Two IB Diploma Programme subjects. One of the subjects must be a foreign language (from group 2)
3. A core, based on guidelines determined by the IB.

Nature of the IBCC core

The programme core is a required element and is at the heart of the International Baccalaureate Career-related Certificate.

The core enables students to enhance their personal and interpersonal development, with an emphasis on experiential learning. While challenging, the core should also be enjoyable and

provide students with a combination of academic and practical skills that will serve them well in their future lives.

For student development to occur, the core should:

- empower students to be responsible for their own learning and development
- challenge students to establish and achieve meaningful goals
- provide students with flexible strategies to deal with familiar and unfamiliar situations
- involve authentic activities that allow students to develop the capacity, and the will, to make a difference
- give students the opportunity to learn, plan, act and reflect.
- develop both practical and intellectual skills

The programme core involves three activities.

Reflective project: students must plan and create a project that draws in all the key strands of the programme; the vocational course, critical thinking and community and service.

Critical thinking: students must participate in a course, which emphasises reasonable and reflective thinking, personal development, problem solving and the acquisition of practical skills.

Community and service: students must undertake unpaid and voluntary activities that help the community and have a learning benefit to the student. The rights, dignity and autonomy of all those involved are respected.

Concurrency of learning is important in the IBCC. The core activities should continue throughout the programme, however, the reflective project is submitted at the end of the programme.

The school is responsible for developing an appropriate core program that will fulfil all the requirements specified in this guide for each component of the core. As a guide it is suggested that about 150-200 hours should be set aside for the entire core, which includes approximately 40 hours for the project over the two or three years of the programme. It is the quality, rather than the quantity, of the core activities that is important. 'Hour counting' is to be discouraged and, consequently, the IB will not mandate a minimum number of hours that each student must devote to the core.

The IBCC and the IB learner profile

The core provides the main opportunity in the IBCC to develop many of the characteristics and attributes described in the IB learner profile.

IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world. IB learners strive to be:

Inquirers	They develop their natural curiosity. They acquire the skills necessary to conduct inquiry and research and show independence in learning. They actively enjoy learning and this love of learning will be sustained throughout their lives.
Knowledgeable	They explore concepts, ideas and issues that have local and global significance. In so doing, they acquire in-depth knowledge and develop understanding across a broad and balanced range of disciplines.
Thinkers	They exercise initiative in applying thinking skills critically and creatively to recognize and approach complex problems, and make reasoned, ethical decisions.
Communicators	They understand and express ideas and information confidently and creatively in more than one language and in a variety of modes of communication. They work effectively and willingly in collaboration with others.
Principled	They act with integrity and honesty, with a strong sense of fairness, justice and respect for the dignity of the individual, groups and communities. They take responsibility for their own actions and the consequences that accompany them.
Open-minded	They understand and appreciate their own cultures and personal histories, and are open to the perspectives, values and traditions of other individuals and communities. They are accustomed to seeking and evaluating a range of points of view, and are willing to grow from the experience.
Caring	They show empathy, compassion and respect towards the needs and feelings of others. They have a personal commitment to service, and act to make a positive difference to the lives of others and to the environment.
Risk-takers	They approach unfamiliar situations and uncertainty with courage and forethought, and have the independence of spirit to explore new roles, ideas and strategies. They are brave and articulate in defending their beliefs.
Balanced	They understand the importance of intellectual, physical and emotional balance to achieve personal well-being for themselves and others.
Reflective	They give thoughtful consideration to their own learning and experience. They are able to assess and understand their strengths and limitations in order to support their learning and personal development.

The IBCC and the MYP

There are two areas in particular in which IBCC students can build on prior learning in the IB Middle Years Programme (MYP), being the areas of thinking and reflection. The development of thinking skills is inherent within the IBCC, with an emphasis on critical thinking, creative thinking and problem solving. The core also requires significant reflection, where students review, describe, communicate and learn from their experiences.

International dimensions

The core builds on other international dimensions of the programme experienced by IBCC students, particularly when studying the Diploma Programme subjects. IBCC students are encouraged to view aspects of the program in a broad, global context. They should be reminded, however, that often it is just as important to look closer to home. Working with people from different social and cultural backgrounds in the local context can do as much to foster international mindedness and mutual understanding, as large international projects.

Ethical education

Ethical education takes place in all components of the programme and the core is no exception. The core provides a major opportunity for ethical education, conceived as involving principles, attitudes and codes of behaviour. While there are ethical principles embodied in the IB mission statement and learner profile, the emphasis in the core is on helping students to develop their own identities and beliefs. Various ethical issues will arise, either implicitly or explicitly, in the course of core activities, and may be experienced as challenges to individual students' ideas, instinctive responses or ways of behaving (for example, towards other people). In the context of the IBCC core, schools have a specific responsibility to help students think, feel and act their way through ethical issues.

Rationale

The International Baccalaureate Career-related Certificate (IBCC) is a unique initiative, designed to provide students with a range of experiences in their upper secondary education.

The programme offers a learning and assessment programme that promotes access, retention, responsibility, development, reflection and achievement. The programme itself:

- provides flexibility to allow for local differences
- is relevant and creative
- sets appropriate and achievable attainment requirements
- encourages significant school and student input in the curriculum and assessment

- provides breadth and balance.

Principles behind the provision of the core

- The IB provides the curriculum and assessment framework for the core in the form of 'the core guide'.
- The school determines the nature of the delivery of the core.
- The school determines its own assessment for the critical thinking course and service learning.
- The school will assess the project based on the assessment criteria determined by the IB.

Aims

The core aims to develop students who are:

- thoughtful and active citizens
- responsible for their own learning and development
- competent and confident communicators
- reflective, creative and critical thinkers
- aware of our shared human condition
- able to establish a sense of identity in a context of time and place
- prepared to think about the needs, perspectives, values and attitudes of other people.

Learning outcomes

The learning outcomes are differentiated from assessment objectives because they are not rated on a scale. Learning outcomes are desirable outcomes that have been achieved, either fully or in part, after experiencing the core activities. School assessment of the core should consider evidence of the following outcomes having been achieved.

- The student has developed a sense of social awareness, community involvement and social action. The student should be able to recognise a need in the community and most importantly is prepared to act to make a difference.
- The student has recognised issues of equity, justice and responsibility. It is important that the student is able to look beyond himself or herself and recognise issues of inequity and injustice both locally and internationally.
- The student has increased their awareness of their own strengths and areas for growth. The student is able to see themselves as individuals with various skills and abilities, some more

developed than others, and understand that he or she can make choices about how to move forward.

- The student has undertaken new challenges. A new challenge may be an unfamiliar activity, or an extension to an existing one.
- The student has planned and initiated activities. This can be shown in activities that are part of larger projects, for example service learning activities in the local community, as well as small student-led activities.
- The student has worked collaboratively with others. Collaboration can be shown in many different activities, such as working in teams and helping the local community resolve a problem.
- The student has shown perseverance and commitment. At minimum, this implies attending regularly, completing assigned tasks and accepting a share of the responsibility for dealing with problems that arise.
- The student has engaged with issues of global importance. The student may be involved in international projects, but at minimum, the student has developed a sense of international mindedness.
- The student has considered the ethical implications of their actions. Ethical issues arise throughout the core activities, and the student must show that ethical principles have played a role in decision-making.
- The student has developed new skills. New skills may be shown in activities and tasks the student has not previously undertaken, or in increased expertise in an established area.

Some of these outcomes may be demonstrated many times in a variety of activities, and others occasionally, as long as there is **some** evidence of every outcome.

The focus on learning outcomes emphasises that it is the quality of the core, and its contribution to the student's development, that is of most importance.

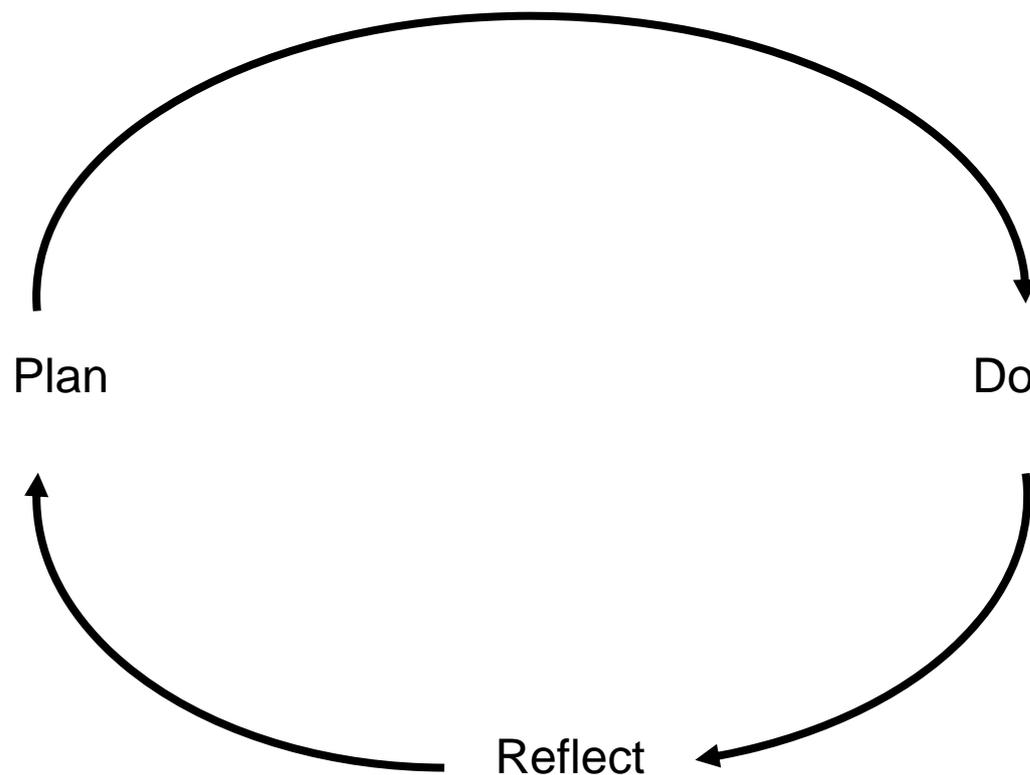
Principles of teaching

- Teachers involved in the core should be aware of its educational provision in relation to the career qualification in order to understand some of the most pertinent issues for the students.
- The voice of the learner is at the forefront of the learning process, not the voice of the teacher. The teacher is the guide and facilitator in the process of student learning.
- The teacher understands the learner's position and engages the learner's current understanding.

Experiential learning

The IBCC is grounded in the principle of experiential learning. In very simple terms, experiential learning refers to any kind of learning based on experience. It is the idea that people can learn very effectively through direct, hands-on experiences.

Experiential learning is often represented by an experiential learning cycle, which models a structured learning process. The IBCC is represented by a 3-stage learning cycle.



The learning cycle suggests that there is more than just the experience involved in experiential learning. The experience is also packaged with facilitated cognitive thinking and the need to adapt or change in light of the experience before acting again.

Do

This is the concrete experience, where students actually do something and is based on the Confucian quote, from around 450 BC, "Tell me, and I will forget. Show me and I may remember. Involve me, and I will understand."

Reflect

This is where the student reviews his or her experience, evaluates actions and synthesizes new understandings.

Plan

Students identify goals and, based on previous experience, develop a plan for future experience.

The cycle is continuous and so, the starting point is somewhat arbitrary.

Assessment

Assessment is an integral part of the teaching and learning process. There are two forms of assessment used in the core.

- Formative assessment is regularly used to judge the effectiveness of both the teaching and learning processes and is essential to ensure teachers and students are able to identify their strengths and weaknesses. Formative assessment is used for community and service and for critical thinking. Examples of formative assessment include; observations, journals, discussion forums, question and answer sessions, peer-review, self-evaluation, essays, and coursework comments. An important element of formative assessment is that it is used to provide feedback during the learning process.
- Summative assessment is the judgement made by the teacher of the standard of achievement reached by each student. Summative assessment is used for the reflective project and is based on pre-determined assessment criteria.

Introduction to the reflective project

The reflective project is at the forefront, and at the heart, of the core because it encapsulates the fundamental, and most important, elements of the programme. It is what makes the IBCC so unique and so meaningful in the context of the student's vocational studies. It embodies each of the aims (identified on page 6 of this guide) that we hope to develop in our students.

From the IB's perspective, the reflective project allows formal assessment of the student's development in the other two strands of the core.

The reflective project is an in-depth body of work produced over an extended period and submitted toward the end of the course. It is the product of the student's own initiative and should reflect his/her experience of the IBCC. It is designed to draw together the key elements of the programme: specifically, the vocational course, community and service and critical thinking.

The reflective project investigates and focuses on an ethical dimension of an issue arising from the student's vocational studies. It is intended to promote high-level research and writing skills, intellectual discovery and creativity. It provides the student with an opportunity to engage in personal research under the guidance of a supervisor (a teacher in the school).

Students begin the project by identifying an issue that comes from their vocational studies. Some examples might be:

- Local authorities ban the use of jet skis on all waterways
- Selling 'free trade' coffee instead of 'traditional coffee'.
- The percentage of indigenous Australians jailed for being drunk and disorderly is much higher than the percentage of non-indigenous Australians jailed for being drunk and disorderly.
- Many English hotels prefer to employ young people from other European Union countries.

Once the issue has been identified, the student needs to explore an ethical dimension associated with the issue. It is the ethical dimension of the issue, and not the issue itself, which is the theme of the reflective project.

While most students will choose to write a formal essay, other possible formats for the project could be a web site/page, a PowerPoint presentation with accompanying notes, a dialogue or a short play.

Whatever the nature of the project, the work must be presented in a format that can be electronically sent to, or accessed by, the IB for moderation purposes. The maximum word limit for the project is 3000 words.

Students need to be exposed to the project at the very beginning of the course, and should be thinking about, and working on, the project throughout the course.

For the duration of the pilot, the project is to be submitted in one of the official languages of the IB; English, Spanish or French.

Aims

The aims of the project are to allow students to:

- produce an extended piece of work
- engage in personal inquiry, action and reflection on a specific ethical issue
- develop research and communication skills
- develop the skills of critical and creative thinking.

Supervision

It is the school's responsibility to ensure that each student engaged in the project receives direct supervision from a qualified person in the school, who can provide appropriate guidance and confirm the authenticity of the work submitted.

The supervisor is required to:

- provide the student with advice and guidance in the skills of undertaking research
- encourage and support the student through the research and writing of the project
- discuss the choice of topic with the student
- read and comment on the first draft only of the project (but does **not** edit the draft)
- monitor the progress of the project to offer guidance and to ensure that the project is the student's own work; and reads the final version to confirm its authenticity.

Responsibilities of the student

The student is required to:

- choose an issue with an ethical dimension that is related to their vocational studies
- consult with the supervisor regarding the issue chosen
- meet deadlines
- address the assessment criteria
- acknowledge all sources of information and ideas in an approved academic manner.

It is strongly recommended that students:

- start thinking about the issue at the beginning of the course

- plan how, when and where they will find material for their project
- plan a schedule for researching and producing the project, including time for delays and unforeseen problems
- record sources as the research progresses (rather than trying to reconstruct a list at the end)
- have a clear structure for the project in mind before beginning to write
- check and proofread the final version carefully
- make sure that all basic requirements are met.

Important aspects of the project

The project requires the student to produce a structured piece of work that identifies, analyses, explores, critically discusses and evaluates an ethical issue arising from their vocational studies.

In developing the project, students should:

- identify an issue
- show an awareness of an ethical dimension regarding the issue
- engage in critical discussion of the ethical dimension of the issue
- develop a personal and relevant evaluation of the ethical dimension of the issue.

While there is not a prescribed structure for the project, it is recommended that the following features are included.

1. An introduction. The introduction should identify the issue to be examined, place it in context and show an awareness of the ethical dimension of the issue.
2. A body. The body could include the results of any research (e.g. primary and secondary), a critical discussion of different perspectives regarding the issue, the impact of the issue on the local and global community, and reasoned argument. Sub-headings/different sections within the main body of the work will help the structure and provide a clear focus for the writer and reader.
3. Illustrations. Graphs, charts, tables, cartoons, photographs/pictures and other images can be effectively incorporated in the project. These illustrations, however, must be related to the text and acknowledged where appropriate.
4. A conclusion. The conclusion should be a reflection of the ethical dimension of the issue by the student. It is an evaluation and should be based on appropriate evidence.
5. References, citations and a bibliography. The project is an academic piece of work and should be presented as such. This ensures intellectual honesty and allows the readers to source the evidence themselves. A reference acknowledges where information, which has been used in the project, has been obtained. A citation is a shorthand method of referencing, which is then linked to the bibliography. A bibliography is an alphabetical list of every source cited in the project. Further details on references, citations and bibliographies can be found in the Extended Essay guide (for first examinations 2009). Students should use a consistent style of referencing throughout the project, and it is recommended that the Harvard

citation and referencing guide or the American Psychological Association (APA) style be used.

Appendices, footnotes and endnotes are not necessary, but if used, should be done so appropriately.

Assessment

Summative assessment principles are used to assess the project.

- In line with its general assessment philosophy, the IB does not take a norm-referenced approach to assessment for the project; instead it uses a criterion-based approach. Students are, therefore, assessed against defined assessment criteria and not against other students. Teachers must use the assessment criteria published in this guide to assess student work internally.
- The descriptors for each criterion are hierarchical. When assessing each student's work, teachers should read the descriptors, starting with level 0, until they reach a descriptor describing a level of achievement that best describes the work. Where it is not clearly evident which level descriptor should apply, teachers must use their judgement to select the descriptor that best fits the student's work. This means that a student's work is likely to contain features denoted by a high level descriptor combined with features appropriate to a lower one.
- Only whole numbers should be used, not partial points such as fractions or decimals.
- The descriptors are a measure of performance and should not be considered as marks, although the descriptor levels are ultimately added together to obtain a total.
- The school should assess all projects. A sample will then be selected by the IB and sent to an external moderator for confirmation of the school's marks. The maximum score for the project is 30.
- The IB will award a grade based on the mark.

26 – 30 A

21 - 25 B

16 – 20 C

11- 15 D

0 – 10 E

Assessment criteria

A The issue in context

This criterion assesses the student's knowledge and understanding of the issue as well as the ability to analyse diverse perspectives on the issue. Also, this criterion assesses the student's ability to contextualize the issue, which could be in terms of, for example, education, technology, politics, economics, the environment or the workplace.

Achievement level	Descriptor
0	The student has not reached level 1.
1	The central issue is identified but it is dominated by one view of the issue. The work demonstrates some knowledge but little understanding of the issue. The work does not relate the issue to context.
2	The central issue is identified and analysed from more than one perspective, but the analysis is unbalanced and lacks important insights. The work demonstrates adequate knowledge and understanding of the issue. The work presents and explores context but in a limited way.
3	The central issue is explored from different perspectives and analysed in a balanced way. Important insights are offered. The work demonstrates good knowledge and understanding of the issue. The work analyses the issue with a clear sense of scope and context.

B Community awareness

This criterion assesses the student's awareness of the impact of the issue on the community. The community could be local or global.

Achievement level	Descriptor
0	The student has not reached level 1.
1	Community members are not consulted. The impact of the issue on the community is referred to but not examined.
2	Evidence of consultation with community members. The impact of the issue on the community is explained.
3	Active and direct collaboration with community members. The impact of the issue on the community is examined.

C The ethical dimension of the issue

This criterion assesses the student's ability to explore the ethical dimension of the issue.

Achievement level	Descriptor
0	The student has not reached level 1.
1	The ethical dimension is identified.
2	The ethical dimension is described.
3	The ethical dimension is examined in detail.

D Cultural awareness

This criterion assesses the student's awareness of cultural influences on the ethical dimension of the issue.

Achievement level	Descriptor
0	The student has not reached level 1.
1	Very little awareness of the influence of culture or values or ideology related to the ethical dimension of the issue.
2	Some awareness of the influence of culture or values or ideology related to the ethical dimension of the issue.
3	Highly knowledgeable about the influence of culture or values or ideology related to the ethical dimension of the issue.

E Reasoning

This criterion assesses the student's reasoning processes, ability to evaluate material and ability to think logically.

Achievement level	Descriptor
0	The student has not reached level 1.
1	A limited or superficial attempt to develop a reasoned argument in relation to the ethical dimension of the issue. Rarely uses deductive and inductive reasoning. Evaluates material superficially. Asserts illogical conclusions.
2	A reasoned argument is developed in relation to the ethical dimension of the issue but it has weaknesses. Inconsistently uses deductive and inductive reasoning. Evaluates material competently. Asserts logical conclusions but they are unclear or imprecise.
3	A reasoned and convincing argument is developed in relation to the ethical dimension of the issue. Consistently uses deductive and inductive reasoning as appropriate. Evaluates material with insight. Asserts conclusions logically and precisely.

F Supporting evidence

This criterion assesses the student's ability to collect and use relevant information from a variety of sources.

Achievement level	Descriptor
0	The student has not reached level 1.
1	Supporting evidence is provided but it is inappropriate. Repeats information provided without question. The student has collected inadequate information to support a meaningful analysis of the issue.
2	Appropriate supporting evidence is provided. Discerns fact from opinion and value judgements. The student has collected adequate information to conduct a basic analysis.
3	Evidence of search, selection and source evaluation skills. Critically examines supporting evidence. The student has collected information from multiple sources allowing for an in-depth analysis.

G Student voice

This criterion assesses the student's ability to express a personal view on the issue, giving reasons for the view.

Achievement level	Descriptor
0	The student has not reached level 1.
1	The student fails to formulate or clearly express his/her own point of view.
2	The student formulates a clear point of view but fails to adequately justify his/her position.
3	The student formulates a clear and precise point of view that is justified.

H Reflection

This criterion assesses the student's ability to reflect on the issue, its ethical dimension and on the processes involved in establishing a viewpoint.

Achievement level	Descriptor
0	The student has not reached level 1.
1	Very little evidence of reflection.
2	Adequate evidence of reflection.
3	Extensive evidence of reflection.

I Written communication

This criterion assesses the clarity and precision of the language used in the project and the ability to explain important ideas and concepts.

Achievement level	Descriptor
0	The student has not reached level 1.
1	Language obscures meaning. Does not explain key concepts and ideas.
2	Language generally does not interfere with communication. Explains key concepts and ideas but does not do so clearly or precisely.
3	Language effectively communicates the student's work. Explains key concepts and ideas clearly and precisely.

J Presentation

This criterion assesses the ability to organise the project in terms of coherence and structure. Documentation style is also assessed.

Achievement level	Descriptor
0	The student has not reached level 1.
1	The project is poorly organized. The project lacks logical connection of ideas. The format is inconsistent throughout. Sources are not cited. Documentation is poorly constructed.
2	Basic organization is apparent. There is an attempt to connect ideas. The format is appropriate, although at times inconsistent. Sources are cited but not always correctly. Some errors in documentation.
3	Organisation is clear. Transitions between ideas enhance the presentation. Consistent use of an appropriate format. Sources are correctly cited. Documentation is essentially error free.

Introduction to community and service – change order

The IB is committed to community and service. Its importance is reflected in the prominent role it has in all of the IB's programmes. Community and service should provide a vehicle for the foundations of a relationship between students and the community that emphasises mutual benefit, and where the needs of the community are matched with the interests and skills of the students. A good service project provides students with opportunities to use their skills and knowledge in real-life situations. Add something about it strongly relating to vocational work

From the student's perspective, a community service programme should help develop learning, responsibility, practical skills, social skills and a sense of caring for others.

The concept of community may be viewed from a local or international/global perspective.

The community and service strand in the IBCC is based on the principles of **service learning**.

Aims

The aims of the community and service strand are to:

- provide a service that meets a community need
- develop working relationships with members of the community
- develop a sense of caring about, and a responsibility for, others
- facilitate active student reflection
- build on existing skills and develop new ones
- enhance the existing school curriculum.

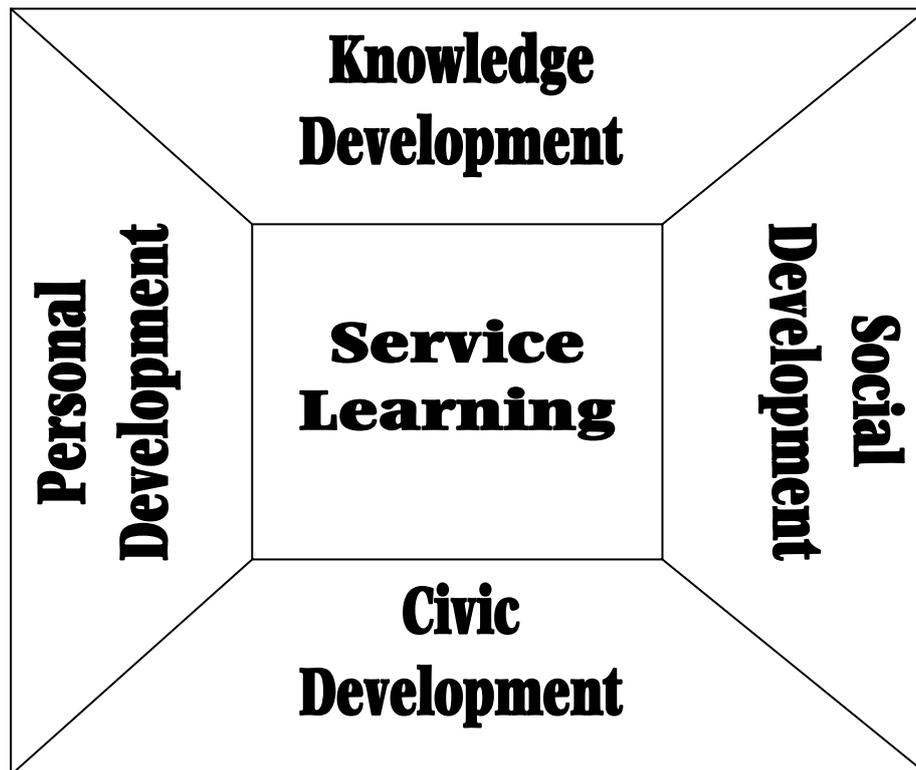
Service learning

Service learning is **not** volunteer work and it is **not** collecting money for charities, although these are considered worthwhile activities. Service learning is authentic service in that it has the potential to transform or redefine a student's behaviour and actions within his or her personal values. It can change the student and the community for the better. A priority of service learning is that it uses community service as a vehicle for new learning that has academic value.

“Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.” (National-Service-Learning Clearinghouse 2007)

Service learning aligns service objectives with learning objectives and is accomplished by activities that encourage “self-reflection, self-discovery, and the acquisition and comprehension of values, skills, and knowledge content” (National Service-Learning Clearinghouse 2007)

Service learning in the IBCC can be represented by the following model.



The model suggests that service learning fosters positive outcomes in four key domains: knowledge development, personal development, social development and civic development.

1. Knowledge development refers to a deeper understanding of the nature, purpose and validity of knowledge. It should lead to improved cognitive and intellectual skills, while providing a richer context for student learning. An effective service learning programme will enhance academic engagement and achievement.
2. Personal development refers to the ability to tap into one's abilities and potential. It is likely to bring out an awareness of one's weaknesses, strengths, inner feelings and thoughts. The aim is to make students more self-aware, self-confident, self-directed and resilient.

3. Social development refers to the ability to interact and work with other individuals, and within groups. Issues of responsibility, commitment, independence, diversity of opinion, leadership, managing emotions and interpersonal relationships should be explored.
4. Civic development refers to becoming involved in community issues leading to prosocial behaviours. It should lead to increased awareness of community connections, community problems, citizenship and social responsibility.

Service learning and experiential learning

“Doing service learning helps students understand their connectedness to and importance in their communities as they experience the role of service provider (rather than the role of service receiver).” (Berman 2006)

The link between service learning and experiential learning becomes evident when students “individually, and in association with others, engage in direct encounter, then purposefully reflect upon, validate, transform, give personal meaning to and seek to integrate their different ways of knowing” (McGill and Warner Weil 1989)

The essence of service learning in the IBCC is experiential learning, as described on pages 8 and 9 of this guide, and schools should base their service learning programme on the 3 stages of the learning cycle.

Plan

The first step of the planning process is to identify a community need appropriate to the service learning programme. It must be something that meets a community need, something that the student/s can realistically achieve and something that interest the student/s. The best way to come up with the appropriate activity is for the supervisor and the student/s to brainstorm ideas. Consider a variety of activities. It might be worthwhile to think about the causes behind each need. Students must also be made to think carefully about the academic/content learning that is to take place.

Once an activity has been confirmed, the next step in the planning process is to find a community partner. Students should be encouraged to draw on the knowledge of teachers, parents and peers. Students should meet with the partner and then work together to formulate a workable plan.

The final step in the planning process is to draw up a detailed plan. Students should be encouraged to adopt a project management approach to the activity. There are specific software packages that could be used for this purpose or students could design their own plan using a spreadsheet or even word processing.

Do

This stage of the experiential learning cycle, as it applies to service learning, involves collaboration, giving and receiving feedback, action, flexibility, managing and leading the project, taking responsibility and problem solving. The supervisor should always be on hand to support the student/s through this stage of the process.

Reflect

For true learning to take place, some form of reflection must take place. Students need to think about the experience and produce something that expresses the experience. Students should be encouraged to undertake cognitive reflection, affective reflection and process reflection (The Strawberry Point School 2007). Cognitive reflection asks the students to think about what they have learnt in terms of new knowledge and skills. Affective reflection asks students to think about how the experience has affected them personally and how it may have affected others. Process reflection asks students to consider what they have learnt from the process itself, including leading and managing a project, working with others and helping the community.

Appropriate reflection activities could include making a video, painting a mural, writing and performing a short play, writing a personal journal and writing a news article for the local newspaper or school newsletter.

Community and service and the IBCC

It is crucial that the nature of the service activities for each student is negotiated between the student and the designated community and service supervisor appointed by the school. The supervisor should act as a mentor advising and helping the student.

The key participants in any service learning activity are the students, the school appointed supervisor and an individual or agency for the community, e.g. a local government department, the local chamber of commerce or a service organisation such as the Lions Club.

Community and service should be an ongoing experience and is expected to occur regularly throughout the program.

There are two aspects to the community and service strand of the IBCC core.

1. Community involvement directly related to the reflective project.
2. Service learning directly related to the needs of the community – students could undertake the service cooperatively or individually.

The reflective project requires students to identify an ethical issue that arises from their vocational studies. The issue should have community implications. Once the issue has been determined,

students need to devote some of their time, devoted to community and service, to exploring the impact of the issue on the community.

In addition to the community involvement associated with the reflective project, students are expected to undertake service learning projects that satisfy community needs. It is most important, however, that student needs are considered as well. A good service project matches the needs of the community with the interests and skills of the students. It is a reciprocal relationship.

Assessment

The nature of the assessment in the community and service strand of the IBCC core is to be determined by the school. It is very strongly recommended that some form of reflection be part of the assessment.

Examples of service learning

A group of students in collaboration with the local community produce a mural in a public place. The mural itself reflects and celebrates the community, possibly in terms of its cultural heritage, its achievements or its future. Students would need to explore other examples of murals that have been produced to enhance the community and discourage graffiti. They would also have to research the role of public art and the relationship between neighbourhood culture and art.

A student could go to a local water source, e.g. a lake or river and clean up a particular section. Samples of water in the affected area could be taken. The student could then learn about the various tests and examples of water pollution. The student could also examine the local history of waterways. The water could be tested and the findings communicated to the local council or sent to a local newspaper.

A group of students, with community assistance, could design and create an eco-friendly garden. As part of the activity, students would learn about ecosystems.

Students may find, in consultation with the local health authorities, that there is a need to raise awareness among members of the community around important health issues. The students could then study the background to specific health problems, e.g. diabetes types 1 and 2, and then a public awareness campaign could be devised around different sectors of the community.

Students become aware of a sharp fall in the numbers of 'endangered species' in their local area. Students develop valuable research skills while learning about the biological and physiological make-up of different species. The students then develop a plan to provide a suitable habitat and enhance population growth. A plan is then devised to communicate the project to the local community.

After discussions with local community representatives, the need to develop a web site to increase awareness of the local museum is identified. This web site might include the museum's logo, general information, a map, photos, a newsletter, gift shop information and a virtual tour of the museum. Students would develop the site, and in so doing would improve their web design skills.

A community funded youth development program requires an activities leader to help design and implement a programme that engages and empowers adolescents in the local area. The student who chose to take on this role would learn about adolescent behavioural problems, while developing a variety of skills in areas such as conflict resolution, leadership and team building.

Students may wish to add an international dimension to their community and service experience. A number of international organisations and NGOs are available to assist, for example Child Health International (http://cfhi.org/program_intro.php4).

Responsibilities

The responsibilities of the school are:

- to liaise with the community to develop a network of service learning contacts and partnerships
- to establish a core group of service learning teacher-mentors
- to make presentations and provide information to students about service learning
- to monitor the progress of students
- to help the students achieve their desired goals

The responsibilities of the student are:

- to determine the nature of their own service learning activities
- to set up initial meeting with community contacts, after initial consultation with the school's service learning teacher-mentor
- to plan and manage their own service learning programme
- to work with the community to achieve pre-determined goals.

Introduction to critical thinking

While this strand of the core is titled 'Critical Thinking', the course is designed to extend beyond critical thinking skills, by introducing other life skills to help students operate in a variety of contexts now and in the future.

The development of most of these skills should be part of the discreet 'Critical Thinking' course, however, schools may find that they can incorporate some skills into other aspects of the programme, for example, within community and service or within aspects of the vocational course.

Given the IBCC is a career-related/vocational programme, the emphasis is on skills development for the workplace, knowing that these skills are transferable skills and can be applied in a range of situations.

Critical thinking should not only develop skills, but also attitudes. In the context of this programme, the term attitudes refers to dispositions or attributes. These are the values that underpin the behaviour of people. The course aims to develop personal qualities and values as exemplified in the learner profile. Other attributes that should be encouraged by the course include responsibility, perseverance, resilience self-esteem and honesty.

While many of the skills in the program can be taught in a classroom environment, other skills and attitudes cannot be taught in a didactic sense and so require students to be involved in activities outside the classroom that foster their development.

The school has significant flexibility over deciding the structure of the course. This will depend on factors including the exposure students' get to aspects of the course in their regular schooling.

All courses will have to meaningfully cover the following areas:

1. Exploring issues of personal identity, values and personal growth.
2. The development of skills that can be applied in various contexts, with an emphasis on the nature of thinking critically.

Aims

The aims of the critical thinking strand are for the student to develop:

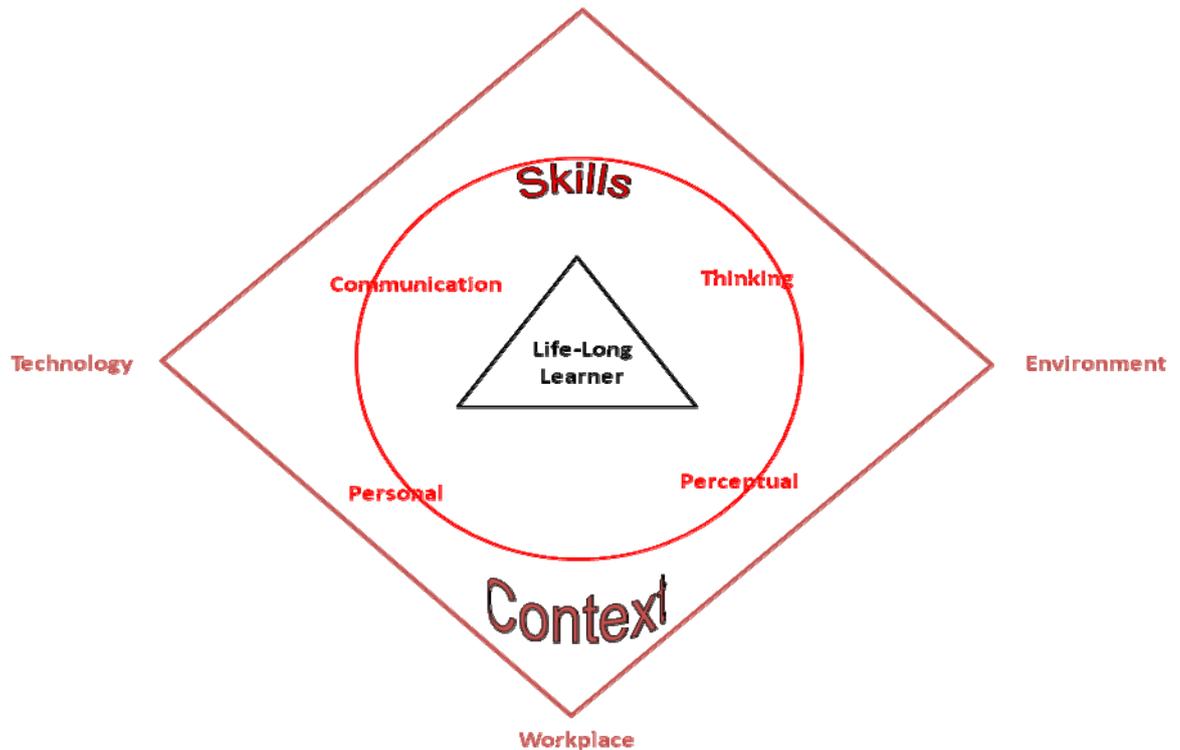
- good intellectual habits

- practical problem-solving skills
- self awareness and an appreciation of identity, individual strengths and individual limitations
- an appreciation of ethical issues relating to the personal, social and work experience of the student
- an awareness that perception and reality are sometimes quite different
- the skill of communicating clearly and coherently
- personal and interpersonal skills for the workplace and beyond
- the skills of reflection and critical thinking in personal, social and professional situations
- broader perspectives and understanding that many questions, issues or problems do not always have simple right or wrong answers.

The Critical Thinking Model

The critical thinking course should be based around the critical thinking diagram shown below.

Amend diagram



At the heart of the model is the learner; the person. The learner uses a range of skills to make sense of the world around us. These skills are strategies or tools, which are used to help explain

the totality of our experiences in the different contexts of everyday life. Crucial to the model is the ability of the learner to reflect on the effectiveness of the skills used.

The Learner

The learner, in this case the student, must be the focus of this strand of the core, and so is at the centre of the model. The learner should be challenged with questions such as: Who am I? What can I be certain of? What are my values? What are my prejudices? What are my strengths and weaknesses?

Learning is about change. It involves acquiring new knowledge, developing new skills and recognising more about oneself and others.

Learning involves active participation by the learner. It is not a passive process. Listening, thinking, questioning and communicating are just some of the examples of strategies adopted by the life-long learner.

It is generally recognised that learners differ in how they learn and so students should, at this stage, be introduced to different ways of learning (as opposed to cognitive abilities and the capacity to learn).

Teaching resources/strategies

Students could complete a values inventory that identifies their social and political views and places them in a context. This is used to generate a discussion about what values are, where they come from and the notion of absolute and relative values.

Students could be exposed to various theories of learning including: learning styles, multiple intelligences and left brain/right brain.

www.funderstanding.com/learning_styles.cfm gives a very good introduction to a number of theories on learning, which students might find interesting. It would allow for comparison and discussion.

www.ldpride.net/learningstyles.MI.htm provides a number of activities that students would enjoy, including finding their dominant learning style.

Skills (outline)

The following diagrams outline the four skill areas that should be emphasised and the detail within each area that could be explored.

Thinking Skills

Critical thinking

- characteristics of the critical thinker
- aspects of critical thinking
- critical thinking skills

Creative thinking

- comparison with critical thinking

Problem solving

- the problem solving process

Lateral thinking

- de Bono's hats, mind mapping (Buzan) and brainstorming

Perceptual Skills

Psychology of perception

- perception illusions
- reliability of eyewitness evidence

Cultural perspectives on perception

- ethnic, religious, gender-based, political, socio-economic

Developing observation skills

- pattern recognition
- avoiding confirmation bias

Communication Skills

Language

- types of language
- language and cognition

Interpersonal communication skills

- listening attentively
- non-verbal cues
- empathy
- conflict resolution

Cultural intelligence

- the impact of cultural background on behaviour

Formal communication skills

- writing essays and reports
- giving speeches and presentations

Personal Skills

Emotional intelligence

- IQ v EQ

Domains of emotional intelligence

- self-awareness
- self-control
- self-motivation

Process skills

- time management
- flexibility
- commitment
- self-appraisal
- decision-making

Thinking Skills

Critical thinking

What does it mean to be a critical thinker? Why is critical thinking sometimes called convergent thinking? In what sense is critical thinking a generic skill for life? Being curious, systematic, analytical, open-minded, fair-minded, sceptical and flexible are all attributes of the critical thinker; why are each of them important? Why is it important to be critical of information sources? What is an argument and what kinds of argument exist? Does all verbal and written communication involve argument? What is the distinction between deductive and inductive reasoning? What are the common fallacies in reasoning? What are sophisms? What constitutes someone's perspective? Why is it important to recognise ethnocentrism and stereotypes? Is there a difference between personal bias and confirmation bias? How do ambiguities, emotive content, false implications and nomenclature distort reasoned argument?

Teaching resources/strategies

Most schools will emphasise this aspect of the programme, and this is to be encouraged because the development of critical thinking skills in our students should be given high priority in the provision of the core.

Teachers may wish to take an issues approach to this section of the core. <http://www.osdemethodology.org.uk/osdemethodology.html> is a good site that encourages people to engage critically when exploring global issues and perspectives. Alternatively teachers may take a themes based approach, such as exploring the role of the critical thinker in each of the contexts outlined in the critical thinking diagram that is the environment, communities, the workplace and technology. Another approach to this section of the core is to take a theoretical approach by following the suggested structure.

This aspect of the course lends itself nicely to data response work, where students are given information (e.g. in the form of statistics, graphs, a newspaper article an editorial, etc) relating to a social issue. Questions are then considered. What does the information suggest? Can we trust the information? What counts as reliable information? Can we trust the source? Can statistics and graphs be manipulated?

Socratic questioning can also be used. A question is asked as a stimulus to reasoning and an analysis of the reasoning. The questions will be on pertinent issues relating to the students experience and should require high order thinking. For example, should law enforcement officers react the same way to different cultural and ethnic communities? This question is designed to explore ideas related to the limits of tolerance of different cultural perspectives and equality before the law.

Texts can be used to help navigate through some of the concepts involved in critical thinking skills. Patrick Daneau offers the following critique of texts he uses in his critical thinking classes. They are:

- Simple; they are easy to understand
- Readable; students will enjoy the stories

- Profound; they allow us to discuss many realities of our world
- Current; they explore topics that are still relevant today

Here is his critique.

The world as I see it by Albert Einstein

A beautiful testimony by a free man. Albert Einstein exhorts to keep one's distance from violence, propaganda and racism, while teaching us how to follow ideas such as truth, justice and beauty.

The country of the blind by H.G. Wells

A delightful tale from one of the world's great writers. It explores the issue of trying to fit into society. What should we give up in order to gain acceptance from others? And once we've become a member of society, should we unquestioningly accept all its traditions, rules and regulations? Should we try and maintain our own culture and traditions in an unsympathetic and sometimes hostile environment? This is a great story for anyone who has ever felt they didn't fit in.

Socrates apology by Plato

A classic from the Greek civilization. In this dialogue, Socrates invites us to evaluate our knowledge, our certainties, our beliefs and our actions in the community.

Brave new world by Aldous Huxley

Undoubtedly one of the most brilliant books of our time. Huxley imagines a perfect society in which there is no war, no violence, no famine and no personal problems. But is it really a perfect world? This work is proof that fiction and imagination can tell us a lot about our world.

The mirror of ideas by Michel Tournier

A simple but profound book by a great observer of the world. Tournier places similar concepts side by side (e.g. love and friendship, culture and civilization, body and soul), emphasizing contrast and complement. The perfect book to nourish discussion.

How to travel with a salmon by Umberto Eco

A funny and irreverent short essay. Eco observes the strange behaviour of human beings and tries to understand our madness. The students and the teacher laugh a lot but learn a lot also.

The principles of newspeak by George Orwell

A brilliant piece of fiction taken from the masterpiece '1984'. What would happen if our language diminished? What would occur if words lost their meaning? Would it be possible to communicate without proper words? In this short story, Orwell reveals the links between words and thought.

Discourse on the origin of inequality by Jean-Jacques Rousseau

A classic from the French philosopher. Rousseau tell us the story of our origins and pretends that human beings should re-evaluate their values. A beautiful text in which the author examines issues such as political inequality and violence between people.

On the shortness of life/On the happy life by Lucius Seneca

Letter to Menoecus by Epicurus

Manual by Epictetus

Marvellous short texts and briefs by some of the greatest sages in history. The Greek and Roman writers exhort us to examine our consciousness, our way of life, our values and our beliefs. Their thinking could be applied to many contemporary personal problems, such as identity crisis, excessive consumption and fear of death.

Creative thinking

What does it mean to be a creative thinker? How is creative thinking different from critical thinking? Why is creative thinking called divergent thinking? What are some of the attitudes that hinder or promote creativity?

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Teaching resources/strategies

The following websites provide a number of creative ideas.

<http://www.virtualsalt.com/crebook2.htm>

<http://www.brainstorming.co.uk/tutorials/creativethinkingcontents.html>

http://www.ahapuzzles.com/creative_thinking_1.htm

Problem solving

Questions to consider when solving a problem include: What do I see as the problem? What are the possible solutions? Which solution is best? How will you implement this solution? What have I learned?

Teaching resources/strategies

The following websites provide a number of fun activities that will encourage students to think laterally and logically.

<http://www.widerdom.com/games/InitiativeGames.html>

<http://www.pedagonet.com/brain/brainers.html>

<http://www.theproblemsite.com/>

Teachers could also take a case study approach to this area of the course. The examples below are courtesy of Petri Rukkinen.

Use creative thinking to come up with a potential solution to the following problems. In each case, use the problem solving steps below to come up with a possible solution.

1. Identify the problem.
2. Generate possible solutions.
3. Evaluate possible solutions.
4. Select the best solution.

Tournee Matkamaa, a small travel agency in Oulu, is facing a serious problem. Over the last five years, consumer purchases of holidays on the Internet have been steadily increasing and, consequently, the demand for conventional travel agency services has been decreasing. As sales and profitability are waning, the only option seems to be to close all operations.

An Oulu goldsmith business named Kultajousi is trying to tackle a difficult problem: over 70 per cent of their sales is generated in December while the rest of the year is extremely slow. If they cannot find a solution to this problem they will have to temporarily lay off two of their employees and possibly permanently dismiss them in the near future. What makes the situation even more serious is the fact that there is a lot of competition in the field and margins are rather low.

A real estate company Kiiston Kiinteistöyhtiö in Oulu is trying to deal with a serious problem. The movie theatre Formia that previously rented property from Kiiston Kiinteistöyhtiö has moved its operations elsewhere. The real estate company lost a long-time leaseholder, which was also financially sound, and now it is virtually impossible to get a new movie theatre chain to lease the empty facilities.

Lateral thinking

What is lateral thinking? What do de Bono's six thinking hats represent? What are the benefits of using the '6 hats' technique? What is meant when we say the brain works associatively as well as linearly? What is a mind map? Who benefits most from mind maps? Is brainstorming fundamentally an individual activity or a group activity? Is brainstorming an uninhibited forum for people to offer their views or does it follow a predetermined structure based on a set of rules?

Teaching resources/strategies

The Six Thinking Hats Lessons for Schools CD is an excellent resource produced for schools and has some excellent activities and applications.

Students should be encouraged to create and draw their own mind maps as well as using mind mapping software, such as MindManager or Inspiration or FreeMind.

Perceptual Skills

The psychology of perception

Often our senses contribute to an erroneous perception of reality. How and why does this happen? What is the relationship between incident, memory and recall? How reliable are eyewitness accounts of an event?

Teaching resources/strategies

A great variety of puzzles and illusions are available in books, magazines and on the Internet to entertain and inform students about perception deception.

For eyewitness reliability, an article titled 'Memory and the Misinformation Effect' (<http://ako.net.nz/research/mame/factors.htm>) is a good starting point.

Cultural perspectives on perception

A number of factors influence what we see (or want to see) and how we interpret events. What are some of these cultural factors?

Teaching resources/strategies

These issues could be explored via literature and film, for example, the poems of Moniza Alvi, the novel *The Ancestor Game* by Alex Miller and the movie *Lost in Translation*.

Developing observation skills

Recognising patterns is the process of recognizing the individual parts of a whole. Why is the ability to recognise patterns important? What is confirmation bias? How do you detect confirmation bias? How can you avoid confirmation bias?

Teaching resources/strategies

Introduce the concept of pattern recognition by getting the students to do a jigsaw puzzle emphasising that finding the pieces and the connections between them, creates the whole picture.

Get students to research the use of patterns in art, literature (e.g. poems), the natural world, science and cryptology.

Two good web sites for class activities are: <http://www.stenhouse.com/pdfs/8156ch06.pdf> and www.shodor.org/interactivate/elementary/lessons/Patterns.html

A class debate can be a good tool to identify confirmation bias.

Explore the concept of confirmation bias through an examination of a controversial issue, such as global warming. *Confusing the public about global warming* by Chris Bertram (<http://crookedtimber.org/2003/09/08/confusing-the-public-about-global-warming>) is a nice article highlighting the issue of confirmation bias.

Alternatively teachers could take a scientific approach by discussing the concept of falsifiability.

Communication Skills

Language

What are the characteristics of language? What are some of the forms of silent language? Why were artificial languages developed? What are the physiological components of the human body that link language, communication and comprehension?

Teaching resources/strategies

Codes and ciphers are forms of secret communication (forms of silent language). Get students to develop their own code or cipher (which could be based on letters, numbers, lines, shapes, colours, etc.) to communicate the lyrics of a popular song or the words of a famous poem.

www.42explore2.com/codes.htm has some good ideas and resources.

Interpersonal skills

Why is the ability to work in teams so valued? What characteristics are required to lead and manage a team? Are there different perceptions of leadership based on age, gender and/or culture? Why are accepting responsibility and accepting criticism necessary attributes when working with other people? Is there a difference between being assertive and being aggressive? Why do some people say there is a difference between hearing and listening? Is it important to interpret body language? Should we 'dress to impress'? Is there a distinction between empathy and sympathy? How can you understand someone without sharing their experiences? What are some of the causes of conflict between people? Should conflict be avoided? Are there strategies to manage and resolve conflict?

Teaching resources/strategies

This section of the course is a good opportunity to bring in role playing activities to model effective and ineffective interpersonal communication strategies.

Another possible strategy is to provide the opportunity for students to work collaboratively in a stimulating environment. Encouraging students to attend a 'development camp' can develop interpersonal skills and personal skills. This could be in the form of a two or three day camp (even prior to the beginning of the programme) that gets students to work together at initially simple tasks, which then get progressively harder, including outdoor adventure / wilderness activities. The key to the success of this type of camp, which has already been trialled in Finland by Charles Roberts (cro@lyseo.edu.ouka.fi), is the emphasis on reflection related to the different activities, as well as inclusion and accessibility.

Cultural intelligence

What is culture? In what ways can the cultural background of a person affect their values, beliefs and behaviour? Why is cultural intelligence important? Does, or can, cultural intelligence reinforce our notions of stereotypes?

Teaching resources/strategies

www.1000ventures.com/business_guide/crosscuttings/cultural_intelligence.html is a good site for resources in this area.

Formal communication skills

What is a CV/resume? What are the features of a good CV? Why is the covering/application letter so important? How should someone prepare for a job interview? How should someone behave in the interview itself? What is business etiquette and why is it so important? In what ways can technology help and hinder communication? What are the key qualities of a good essay? How do students avoid plagiarism? What is an abstract? When should footnotes or endnotes be used? Is there a difference between a list of references and a bibliography? Is there a particular style/structure that must be used when writing reports? How do speeches that inform differ from speeches that persuade and speeches that entertain? Are there strategies that can be employed to minimise the fear of public speaking? What makes a good presentation? When and how can the use of clichés, colloquial phrases, euphemisms, jargon, slang and redundancies lead to confusion? Use of technology/vocational. Business etiquette.

Teaching resources/strategies

Students could role-play interviews by taking the roles of the interviewer and the interviewee.

<http://www.ravenwerks.com/practices/etiquette.htm> and <http://www.cyborlink.com/> are good sites to explore the concept of business etiquette. The second site is really interesting and students will enjoy seeing the differences between countries.

<http://homepages.inf.ed.ac.uk/jbednar/writingtips.html> has some good tips for formal writing.

Personal Skills

Why is emotional intelligence considered important? How is the EQ different to the IQ? What number in the EQ is considered desirable? In what sense are process skills different from the domains of emotional intelligence? How meaningful and important are the IQ and EQ scores?

Teaching resources/strategies

While some of the domains of emotional intelligence and some of the process skills may not be evident in many of our students, they can be acquired and developed over time. Students should be exposed to the concepts and introduced to a number of strategies to help them enhance the skills and competencies that are likely to lead to positive outcomes in a person's life. www.businessballs.com is a good starting point to explore some interesting and innovative ideas.

Context

The skills that students acquire in this strand of the core, need to be applied in various contexts. The four main contexts that should be analysed are technology, communities, the environment and the workplace. It is suggested that a 'big picture' approach is taken, whereby key issues linking the skills and the context are explored. Some possible 'big picture' issues and questions are identified below.

Technology

Perceptual: How does the cultural context affect the way in which technology is used?

Personal: Electronic communication lacks an emotional context. What problems, if any, does this raise?

Thinking: Should you believe everything you read on the Internet?

Communication: How can technology help you get your message across?

Communities

Perceptual: Does living in a society of human beings compromise our individual human rights?

Personal: Do individuals really have any say in the decision-making processes within a nation?

Thinking: Are so-called multicultural communities in fact fertile ground for stereotyping, racist behaviour and terrorist acts?

Communication: Has the Internet homogenized and pluralized cultural identities?

The Environment

Perceptual: What evidence is there to suggest that global warming is a result of human intervention in the natural world?

Personal: More and more people are committed to helping the environment. What are some of the options available to people to reduce their 'carbon footprint'?

Thinking: Sustainable development involves protection of non-renewable resources. Is nuclear energy a viable alternative to the use of fossil fuels?

Communication: What are some of the national and international agreements on biodiversity, recycling, renewable energy, global warming and deforestation?

The Workplace

Perceptual: Customers often confuse perception with reality, leading to conflict. What should businesses do to resolve this confusion?

Personal: It is now acknowledged that a person's values and character traits are good indicators of success in a working environment. How can a business promote emotional intelligence in the workplace?

Thinking: Groupthink can occur in very task-oriented and goal-driven organisations. What are some of the most famous examples of groupthink and how can it be avoided in the workplace?

Communication: Every organisation has its own distinct culture, which is reflected in its organisational structure. How does the nature of the organisational structure of a business affect communication within that business?

Assessment

The nature of the assessment in the critical thinking strand of the IBCC core is to be determined by the school. The assessment, however, in this strand of the core should be an aid to teaching and learning and, therefore, should be for formative purposes. Appropriate examples could include essays on particular topics, teacher feedback on various activities and peer evaluation of work.

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