**Center for Teaching Learning and Technology**

University of Central Asia

**School of Arts and Science**

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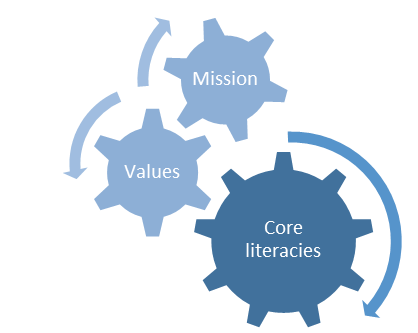
**Core Literacies**

# UCA Mission

The mission of UCA is to promote the social and economic development of Central Asia, particularly its mountain communities, by offering an internationally recognized standard of higher education, and enabling the peoples of the region to preserve their rich cultural heritage as assets for the future. UCA seeks to contribute leadership, ideas, and innovations to the economies and communities of the region through educational and vigorous research programmes that produce knowledgeable, skilled, and creative graduates. The university community is grounded in the core value of Service to Humanity.

# Core Literacies Overview

The School of Arts and Science has identified 10 Core Literacies which focus on the skills, knowledge and abilities beyond disciplinary content knowledge, that the graduates of UCA gain as a result of their learning experiences while at the University. These core literacies and attributes develop the characteristics required of responsible and effective global citizens with the ability to create innovative solutions to problems and communicate perceptively and effectively. They develop an awareness of ethical, social and cultural issues and stress the importance of professional skills and responsibilities and a high regard for human rights, equity and ethics. Achievement of each Core Literacy cannot be achieved in a single course or through a single experience; it is acquired cumulatively across students’ entire UCA career through the institution’s curricular and co-curricular programming*.*



# Core Literacies – definitions

|  |  |
| --- | --- |
| **Core Literacy** | **Definition** |
| Written Communication Blackboard outline | The ability to create written works which use proper English grammar, punctuation, syntax and sentence structure to coherently express ideas and facts in a manner suitable to the intended audience. |
| Oral CommunicationTeacher with solid fill | The ability to participate verbally in discussions and conversations, exchange thoughts and information, make clear presentations, facilitate discussions and interact with a variety of audiences*.* |
| Quantitative Literacy  Mathematics outline | The ability to select and use the required mathematical/analytical concepts and operations necessary for problem-solving, decision-making, economic productivity and real-world applications |
| Information Literacy Information with solid fill | The ability to identify when there is need for, locate, evaluate, organize, use, and share information to inform and solve problems in relation to an identified challenge or situation, in an effective and responsible manner |
| Creative Thinking  Idea with solid fill | The ability to explore ideas, generate possibilities, and seek out and/or develop other alternate responses rather than opting for one immediate or “correct” answer. |
| Ethical Reasoning and Personal and Social Responsibility  Weights Uneven with solid fill | The ability to respect other individuals and their rights, and make informed choices that benefit individuals, society as a whole, and the environment, in a dependable, accountable, self- disciplined, persistent, and motivated manner while being sensitive and responsive to the well-being of others, and aware of the possible consequences of every action. |
| Inquiry and AnalysisResearch with solid fill | The ability to use a systematic process for exploring issues and challenges through the collection and analysis of evidence gained by breaking complex topics or issues into relevant and simpler parts. |
| Critical Thinking and Problem Solving  Scientific Thought outline | The ability to address complex issues and problems by acquiring, processing, analyzing, and interpreting information to make informed judgments and decisions. |
| Intercultural Knowledge and Global Perspective  Globe outline | The ability to explore global issues and challenges from diverse worldviews that respects differences, while informing and broadening individual views and interacting effectively in a variety of cultural contexts. |
| Digital Literacy  Internet with solid fill | The skills and knowledge required to locate, use, summarize, evaluate, create, and communicate information while using digital technologies and mobile platforms; and to engage safely, responsibly and ethically in online communities and networks. |

# ****Core Literacies and the Curriculum****

The University embeds these literacies into the curriculum, so students have opportunities to develop them as they progress through their courses and their extra-curricula activities and experiences. The expectation is that all graduates of UCA will be proficient in these core literacies.

During their UCA experience all students should have multiple opportunities to achieve the core literacies. Assessments must exist to evaluate achievement of the standards for each Literacy. These standards are referred to as the benchmark for each literacy. The benchmark describes the points of reference against which students are assessed to determine the level of achievement of the literacy. During a curriculum review process, each Program must be able to provide evidence of students’ achievement of the benchmark associated with each Core Literacy.

The goal of identifying the core literacies in each course is to determine if, and where, the elements of the required core literacies are:

* taught by faculty through the presentation of materials and experiences,
* practiced by students as part of the learning activities of the course and
* assessed by faculty so there is a way to measure that the elements of the core literacies have been met.

Each Program area at UCA – Preparatory, Liberal Arts, Major, and elective areas of study – will provide evidence of the ways in which the literacies are taught, practiced and assessed.

# How to use this Guide

Faculty at UCA will use the guide to determine which knowledge, skills and attitudes are taught by faculty, practiced by students and/or assessed in each course.

Please note: If an instructor identifies that materials related to the core literacy are **taught, practiced and/or assessed** in the course then they should be able to provide a description in the syllabus (bullet points or a couple of sentences) about what the material is and how it is taught. You should also indicate the level of achievement that is expected in a particular course.

Similarly, when it is indicated that the student has an opportunity to apply the knowledge in such a way so as to **practice** skills, they should be able to provide a brief description of how this practice occurs.

As well, it must be possible to provide evidence to show that the **assessing** of the core literacy area is done in such a manner as to show the achievement of the Benchmark for that core literacy. In this guide, for each Core Literacy there are:

* a short definition of the literacy
* a paragraph explaining the benchmark for achievement that the graduates of UCA will demonstrate
* a section that sets the context for the levels of achievement followed by ways that this literacy can be assessed at the basic, intermediate and advanced levels. This information is not meant to be used exactly as written when creating a rubric for an assessment – it is meant to be used as a guide and contextualized for the course/semester/major.
* guiding questions for the instructor to use to select on and determine if the Core Literacy is taught, practiced and/or assessed in the course,

**Definitions**

**Teach:** There is deliberate instruction that explains, defines or discusses the knowledge and skills that are included in the Core Literacy.

**Example** (using Critical Thinking): As part of the course content, the elements of what defines critical thinking are discussed and a model or process for thinking critically is presented and demonstrated. There is specific time spent during the course teaching students how to think critically.

**Practice:** Students have to apply elements related to Core Literacy as part of the activities during the class. Ideally, they should also receive feedback on the task/activity so they are able to correct their mistakes before the elements of the Core Literacy are formally assessed and a grade assigned to their work.

**Example:** A scaffolded writing assignment would include a short one-page draft, which receives feedback to inform a summative assessment or longer essay or piece of writing.

**Assess:** The standards associated with the Benchmark for the Literacy are evaluated to determine the student’s level of achievement of the Literacy and whether the student has demonstrated proficiency. The evaluation tool (rubric) clearly identifies the ways in which the Literacy are being assessed.

**Example:** An oral presentation requires specific elements that are clearly identified and assessed in the rubric associated with the presentation.

\*Please note – the information presented in this Guide is grounded in the work of the information presented in this Guide is grounded in the work of the American Association of Colleges and Universities (AAC&U). ***Some of the information is either copied or adapted from the AAC&U content***. This is consistent with the intent of the development of the rubrics by teams of faculty experts representing colleges and universitites across the United States: ***“The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses .”***

Written Communication

**Written Communication:** the ability to create written works which use proper *English* grammar, punctuation, syntax and sentence structure to coherently express ideas and facts in a manner suitable to the intended audience.

## **Benchmark of** Achievement

Students are able touse correct English grammar, punctuation, syntax and sentence structure to express ideas and facts in a manner suitable to the intended audience, when creating written works. They show an understanding of the role of voice and an awareness of context, audience and purpose when writing. They are able to use straightforward language to express themselves clearly, while following the expectations and conventions for the writing task and intended audience.

Written communication can involve working with many different writing technologies, and it may involve mixing texts, data, and images.

## Levels of Achievement

Written communication skills and abilities develop through an iterative experience across the entire curriculum. Writing assignments (within a particular program) are sensitive to particular contexts and purposes. Certain skills and knowledge are fundamental to the success of written communication. These fundamental concepts include ensuring that graduates understand the:

* + ***purpose*** for the writing
  + ***context*** for the writing
  + ***disciplinary conventions*** that will influence the writing; and,
  + ***genre conventions*** that will also affect the writing.

With all effective written communication writers make certain assumptions and decisions about their audience. This will be seen in the choices made related to the content, organization and structure of the work; the reasoning, evidence and mechanical conventions used; and, in the final presentation of the writing.

**Basic**

* There is minimal attention to context, audience, purpose, and to the assigned tasks(s).
* Appropriate and relevant content is used to develop simple ideas in some parts of the written work.
* A consistent system for basic organization and presentation is used for the written task.
* There is an attempt to use sources to support ideas in the writing.
* The language used sometimes impedes meaning because of errors in they ways it is used.

**Intermediate**

* An awareness of context, audience, purpose, and to the assigned tasks is evident.
* Appropriate and relevant content is used to develop and explore ideas through most of the work.
* Expectations appropriate to a specific discipline and/or writing task(s) for basic organization, content, and presentation are followed.
* There is an attempt to use credible and/or relevant sources to support ideas that are appropriate for the discipline and genre of the writing.
* Language that clearly conveys meaning to readers is used, although writing may include some errors.

**Advanced**

* There is a thorough understanding of context, audience, and purpose in response to the assigned task(s).
* Appropriate, relevant, and compelling content is used to illustrate mastery of the subject, conveying the writer's understanding, and shaping the whole work.
* Detailed attention to and successful execution of a wide range of conventions particular to a specific discipline and/or writing task (s) including organization, content, presentation, formatting, and stylistic choices are evident.
* There is skillful use of high-quality, credible, relevant sources to develop ideas that are appropriate for the discipline and genre of the writing.
* Straightforward language that skillfully and clearly communicates meaning to readers is used.
* Written work is virtually error-free.

## Guiding questions

**Teach**

* Is grammar, spelling, sentence structure, and conventions of writing discussed and explained in class?
* Are examples of error-free documents shared and discussed?
* Is the use appropriate language to convey meaning and facts to readers discussed in class?
* Are disciplinary and genre conventions and norms taught?

**Practice**

* Are there opportunities to create a range of written works that show an awareness of context, audience and purpose for multiple forms of writing?
* Is writing practiced and do students receive feedback on drafts of written assignments so they have an opportunity to revise before submitting the final version?
* Are there opportunities to explore the role of writing for different media?
* Are written assignments, other than essays, required as part of the course work?

**Assess**

* Does the grading scheme for assignments include grading for writing skills?
* Do assignments require students to write in professional and/or academic language?
* Is it a course requirement to produce error-free documents that conform to expectations of the task assigned and the needs of the relevant audience?

# Oral Communication

**Oral Communication:** the ability to participate verbally in discussions and conversations, exchange thoughts and information, make clear presentations, facilitate discussions and interact with a variety of audiences*.*

Benchmark for Achievement  
Students are able to successfully identify key messages and organize ideas and thoughts in a consistent and sequential manner. Further, they identify and select delivery techniques including posture, gestures, eye contact, and vocal expressiveness designed to engage the intended audience. They demonstrate professionalism and confidence in their style and voice whether speaking with one person or a larger audience.

## Levels of Achievement

Oral Communication takes many forms including conversations, dialogues, and presentations of an individual or group nature. There must be evidence in the presentation that attention is being paid to the message, the delivery techniques, the language used and the organization of thoughts and ideas.

*Note*: The ability to communicate orally can be demonstrated in many ways, including through poems, narratives, dialogues, presentations, formal and informal speaking, podcasts, videos and on digital platforms.

**Basic**

* An organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is not evident within the presentation.
* Language choices are unclear and minimally support the effectiveness of the presentation. Most of the language in presentation may not be appropriate to audience.
* Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) detract from the presentation, and the speaker does not appear to be confident when speaking.
* Insufficient supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) are used during the presentation.
* The central message can be determined but is not explicitly stated in the presentation.

**Intermediate**

* An organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is occasionally evident within the presentation.
* Language choices are thoughtful and generally support the effectiveness of the presentation. Language used in the presentation is generally appropriate to audience.
* Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation interesting, and speaker appears comfortable.
* Materials used during the presentation (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) generally supports the presentation or establishes the presenter's credibility/ authority on the topic.
* The central message is clear and consistent.

**Advanced**

* An organizational pattern (specific introduction and conclusion, sequenced material within the body, and transitions) is clear and and makes the content of the presentation cohesive.
* Language choices are imaginative, memorable, and/or compelling, and enhance the effectiveness of the presentation.
* Language in presentation is appropriate to audience.
* Delivery techniques (posture, gesture, eye contact, and vocal expressiveness) make the presentation compelling, and speaker appear confident.
* A variety of types of supporting materials (explanations, examples, illustrations, statistics, analogies, quotations from relevant authorities) supports the presentation or establishes the presenter's credibility/ authority on the topic.
* The central message is compelling (precisely stated, appropriately repeated, memorable, and strongly supported.)

## Guiding Questions

**Teach**

* Are general principles of oral communication such as ways to communicate with, inspire and/or persuade an intended audience taught?
* Are guidelines for effective oral presentations explained?
* Are (discipline-specific) oral communication styles and practices taught?

**Practice**

* Are there informal or low-stakes opportunities to practice oral communication/presentations in the classroom?
* Are there opportunities to engage in conversations and presentations, and to identify key messages designed to meet the needs of the intended audiences?

**Assess**

* Are oral communication skills directly assessed?
* Are a variety of delivery techniques to enhance the effectiveness of oral presentations required during oral presentations?
* Are the students required to do an oral presentation and are the guidelines for grading the oral techniques stated in the rubric?

# Quantitative Literacy

**Quantitative Literacy:** the ability to select and use the required mathematical/analytical concepts and operations necessary for problem-solving, decision-making, economic productivity and real-world applications

## Benchmark for Achievement

Students are able to accurately complete calculations and estimations. They know how to reason and solve quantitative and qualitative problems from a variety of contexts and everyday life situations. Students can work with numerical data and analyse the data to make connections, draw conclusions and test theories.

## Levels of Achievement

Quantitative Literacy involves a way of thinking about the world that relies on data and on the mathematical analysis of data to make connections and draw conclusions. Regardless of career choices, virtually all graduates require skills related to the ability to draw information from various sources (graphs, charts, geometric figures, etc.) and the ability to accurately complete straightforward estimations and calculations. Quantitative Literacy allows graduates to analyze data, represent the meaning of data in a variety of relevant formats, make judgements based on the data, and communicate the results of their work for various purposes and audiences.

**Basic**

* Attempts to explain information presented in mathematical forms but draws incorrect conclusions about what the information means. For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.
* Attempts to convert data and other relative information into appropriate mathematical forms (equations, charts, graphs, etc) but the results are usually not accurate
* Calculations are attempted but are not accurate.
* Presents an argument for which quantitative evidence is important but does not provide adequate numerical support. (May use quasi-quantitative words such as "many," "few," "increasing," "small," and the like in place of actual quantities.)

**Intermediate**

* Provides somewhat accurate explanations of information presented in mathematical forms, but occasionally makes minor errors related to computations or units. For instance, accurately explains trend data shown in a graph, but may miscalculate the slope of the trend line.
* Converts data and other relative information into appropriate mathematical forms (equations, charts, graphs, etc) but the results are only accurate some of the time
* Calculations attempted represent only a portion of the calculations required to comprehensively solve the problem.
* Uses quantitative information but does not effectively connect it to the argument or purpose of the work.

**Advanced**

* Provides accurate explanations of information presented in mathematical forms. Makes appropriate inferences based on that information. For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events
* Converts data and other relative information into accurate mathematical forms (equations, charts, graphs, etc).
* Calculations attempted are sufficiently comprehensive to solve the problem.
* Uses quantitative information in connection with an argument and the data presented provides and effective explanation.

## Guiding Questions

**Teach**

* Are ways to convert data and other relative information into appropriate mathematical forms (equations, charts, graphs etc.) taught?
* Are a variety of situations requiring students to use techniques designed to solve quantitative problems related to differing contexts and to everyday life situations discussed and explained?
* Is the interpretation and evaluation of quantitative data taught?

**Practice**

* During class activities do student practice using estimation to conceptualize problems?
* Are there opportunities to practice creating and explaining graphs and other visual descriptors of trends, relationships, or status changes based on the data collected and the analysis completed?
* Are students provided with opportunities to engage with inductive and deductive reasoning?
* Do students practice logical reasoning to solve problems?
* Are students encouraged to explain complex mathematical learning in lay terms?
* Are solving open response questions practiced in class?

**Assess**

* Is there a requirement to complete calculations to answer questions?
* Is using data as the basis for decisions and judgments and to support an argument assessed?
* Are students required to draw graphs, charts and other visual descriptors of trends, relationships, or status changes?
* Is there a requirement to use relevant quantitative analysis of data as the basis for decisions and judgements?
* Are open response mathematical questions (questions that have more than one possible correct solution) used in assessments?

# Information Literacy

**Information Literacy:** the ability toidentify when there is need for, locate, evaluate, organize, use, and share information to inform and solve problems in relation to an identified challenge or situation, in an effective and responsible manner.

## Benchmark for Achievement

Students are able to recognise not only when information is needed, but also the types and sources of the required information. They know how to locate and evaluate sources and resources, and to present the information in a manner that addresses the challenge or question. They have the ability to cite, reference, pharaphrase, summarize and quote information for a range of contexts.

## Levels of Achievement

The simple accessing of information is no longer the required norm for university graduates. Knowing when information is needed, articulating the type and format of the required information, and then locating, evaluating and synthesizing the information and presenting it in a manner that addresses the challenge or situation identified is now the expectation.

**Basic**

* There is difficulty in determining the types of information (sources) related to key concepts or required to answer questions.
* The information retrieved or accessed lacks relevance and quality.
* When information for sources is communicated it may be fragmented and/ or used inappropriately (misquoted, taken out of context, or incorrectly paraphrased, etc.), so the intended purpose is not achieved.
* At least *one* of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) is used.
* An understanding of the ethical and legal restrictions on the use of published, confidential, and/ or proprietary information is evident in student work.

**Intermediate**

* When accessing information, the key concepts or information required to answer question is evident.
* A variety of search strategies are used to access relevant information, and the ability to refince a search is evident.
* Information from sources is communicated, organized and synthesized so that the intended purpose is achieved.
* At least *three* of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) are used.
* A full understanding of the ethical and legal restrictions on the use of published, confidential, and/ or proprietary information is evident.

**Advanced**

* When accessing information, the scope of the research question or thesis and the key concepts associated with it are clearly defined.
* The types of information (sources) selected are directly related to concepts or answer research question.
* Information is accessed using effective through well- designed search strategies to find the most appropriate information sources.
* The relevance of the contexts of information is thoroughly (systematically and methodically) analyzed and carefully evaluated when presenting a position.
* Information from sources is communicated, organized and synthesized to fully achieve a specific purpose, with clarity and depth
* *All* of the following information use strategies (use of citations and references; choice of paraphrasing, summary, or quoting; using information in ways that are true to original context; distinguishing between common knowledge and ideas requiring attribution) are used correctly.
* A full understanding of the ethical and legal restrictions on the use of published, confidential, and/ or proprietary information is evident.

## Guiding Questions

**Teach**

* Are ways to identify the type(s) and scope of information needed for a specific purpose taught in the course?
* Are students taught effective information search strategies?
* Are ways to access information from credible sources and discriminate between reliable and unreliable sources explained?
* Are ways to evaluate the authority, reliability and bias of an information source explained?

**Practice**

* Do students practice identifying what information is needed to complete a task or solve a problem?
* Do students practice the effective use of information for a specific purpose?
* Do students have the opportunity to evaluate the quality of information and validate inferences drawn from the information?

**Assess**

* Are students required to use information, in all its forms, legally. responsibly and ethically? Are there consequences if this is not done?
* Is the use of citations and references, paraphrasing, summarizing and quoting information for a range of contexts part of the assessment rubrics for the course?

**Assignments would have to require one or more of the following tasks:**

* Determine the extent of information needed
* Access the needed information effectively and efficiently
* Evaluate information and its sources critically
* Incorporate selected information into one’s knowledge base
* Use information effectively to accomplish a specific purpose
* Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally

# Creative Thinking

Creative Thinking: the ability to explore ideas, generate possibilities, and seek out and/or develop other alternate responses rather than opting for one immediate or “correct” answer.

## Benchmark for achievement

Students can generate many different kinds of ideas, manipulate ideas in unusual ways and make unconventional connections in order to outline novel possibilities to meet a given purpose. The creative thinker pushes beyond boundaries in new, unique, or atypical recombinations, using or recognizing creative risk-taking to achieve a solution.

## Levels of Achievement

Creative thinking as a discrete skill is distinguished here from a more general sense of creativity. Creative thinking stems from an understanding of existing connections within boundaries and realities. Students are able to go beyond the known boundaries to create new, unique, or atypical combinations of data. As a result, they are able to uncover, see, or create new solutions to specific situations or challenges.

**Basic**

* Only the ability to model or reproduce an exemplar of a given assignment, is evident.
* Only a single approach to solve a problem or answer a question is considered.
* Alternate, divergent, or contradictory perspectives or ideas are acknowledged (mentioned in passing), but not used.
* Only existing connections among ideas or solutions are recognised.

**Intermediate**

* There is evidence of the ability to adapt or personalize an exemplar of an assignnemt.
* Alternate, divergent, or contradictory perspectives or ideas are explored, when solving a problem
* Novel or unique ideas are expressed when responding to questions or creating a product.
* Ideas or solutions are connected in novel ways.

**Advanced**

* An entirely new object, solution or idea that is appropriate to the assignment is created.
* New directions or approaches to an assignment are evident in the final solution/product/work.
* Alternatives ideas and solutions are evaluated and used to develop a logical, consistent way or plan to solve problems.
* A novel or unique idea, question, format, or product is used to create new knowledge or knowledge that crosses disciplinary boundaries.

## Guiding Questions

**Teach**

* Are ways to identify similarities and connections among ideas or solutions discussed in class?
* Are ways to explore alternate, divergent, or contradictory perspectives or solutions explained?
* Are creative thinking skills such as divergent thinking, convergent thinking, lateral thinking and so on, described and discussed?
* Is a framework for creative thinking or the creative process explained?
* Are ways to identify the value of alternate, divergent, or contradictory perspectives or solutions explained?

**Practice**

* Do assignments or activities require students to develop new ideas or look at existing ideas in a different way?
* Are brainstorming or trial and error approaches to learning practiced in the classroom?
* Are students encouraged to explore new models and ways of doing things during class activities?
* Do students have opportunities to experiment and take risks during class activities/assignments?

**Assess**

* Do assignments require students togenerate novel/new approaches or solutions to challenges and situations and do not just require one correct answer?
* Are criteria associated with creative thinking clearly noted in the rubric or grading criteria?
* Do assignments require that the ideas presented represent a variety of concepts from different contexts or disciplines?
* Do assignments require that ideas are combined in original ways to solve a problem, address an issue or make something new?

To assess Creative Thinking, you need to ask these types of questions in your assessments

• How would you improve \_\_\_\_\_\_\_\_\_\_?

• Can you invent \_\_\_\_\_\_\_\_\_\_?

• How would you adapt \_\_\_\_\_\_\_\_\_\_ to create a different \_\_\_\_\_\_\_\_\_\_?

• In what way would you design \_\_\_\_\_\_\_\_\_\_?

• Can you construct a model \_\_\_\_\_\_\_\_\_\_?

• Can you think of an original way to \_\_\_\_\_\_\_\_\_\_?

• What would happen if \_\_\_\_\_\_\_\_\_\_?

• Can you develop a proposal which would \_\_\_\_\_\_\_\_\_\_?

• How else would you \_\_\_\_\_\_\_\_\_\_?

# Ethical Reasoning, Personal and Social Responsibility

**Ethical Reasoning, Personal and Social Responsibility** is the ability torespect other individuals and their rights, and make informed choices that benefit other individuals, society as a whole, and the environment, in a dependable, accountable, self- disciplined, persistent, and motivated manner while being sensitive and responsive to the well-being of others, and aware of the possible consequences of every action.

## Benchmark for Achievement

Students are able to identiy ethical dilemmas and apply ethical reasoning to resolve situations or solve problems that may arise from a conflict of beliefs. They are sensitive and responsive to the well-being of others consistent with the expectations and requirements of the contexts and the societies in which they live and work. They recognize ethical issues and discuss the complexities or interrelationships between the issues. Students describe and analyze positions on ethical issues, practice ethical decision-making skills, and actively reflect upon their approach when faced with difference in society.

## Levels of Achievement

Students’ ethical self-identity evolves as they practice ethical reasoning and decision making and learn how to analyze various positions on ethical issues and to fully grasp the context in which such issues arise. As social beings, they have achieved a level of responsibility to self and others that is consistent with the expectations and requirements of the contexts and the societies in which they live. This requires a fully developed awareness of societal norms, and the skills and knowledge to follow these expectations in a mature and responsible manner.

**Basic**

* Basic and obvious ethical issues are recognized, but the student fails to grasp complexity or interrelationships.
* There is an awareness of ethical concepts and theories, but they are not accurately applied when solving dilemmas or answering questions
* Different perspectives are recognised when responding to quesitons
* Personal values and strengths and abilities are identified and discussed
* A position is stated but the objections to and assumptions and limitations of the different perspectives/ concepts are not clear.
* Ethical concepts/perspectives can be applied to an ethical question with support (using examples, in a class, in a group, or a fixed-choice setting) but is unable to apply ethical perspectives/ concepts independently (to a new example.).

**Intermediate**

* Both core beliefs and the origins of the core belief are discussed or anlayzed in detail.
* Major ethical theories are identified and used, and the details of the theory or theories used are explained, but the explanations have some inaccuracies.
* Ethical issues presented in a complex, multilayered context are recognized, as well as the cross-relationships among the issues.
* Ethical perspectives and/or concepts related to an ethical question are accurately applied, but the specific implications of the application are not clear.
* The objections to, assumptions and implications of different ethical perspectives and/orconcepts related to a stance of position are stated and responded to, and the rational is adequate and effective, but the different parts of the response are not clearly connected.
* Different perspectives are recognised and appreciated
* Personal values and strengths and abilities are identified and used to determine ways they can contribute to their communities and care for the environment

**Advanced**

* Core beliefs and the origins of the core beliefs are discussed and analyzed in detail and the discussion has depth and clarity.
* When using an ethical theory or theories, the gist and details of the theory or theories are accurately explained and used.
* Eethical issues related to a complex, multilayered (gray) context and the cross-relationships among the issues are recognized.
* Ethical perspectives and/or concepts are applied to an ethical question, accurately, and full implications of the application are considered.
* The objections to, assumptions and implications of different ethical perspectives and/or concepts related to a stance of position are stated and responded to, and the rational is adequate and effective.
* Different perspectives are used to interpret situations and build sustaining relationships and interactions

## Guiding Questions

**Teach**

* Are decision making skills taught?
* Are ethical theories (e.g. utilitarianism, morality, natural law, virtue) or ethical concepts (e.g. rights, justice and duty) explained and discussed?
* Are skills for interacting with others in respectful and caring ways taught?

**Practice**

* Are there opportunities to practice ethical decision-making skills?
* Are there opportunities during class activities to apply ethical perspectives and concepts to solve problems?
* Are their opportunities to practice skills related to personal and social responsibility including relationship management; conflict resolution; leadership; teamwork; self-management; and personal responsibility.
* Do students engage in discussions about moral problems?
* Are students encouraged to interact positively and sincerely with difference and diversity?
* Are there class discussions that require the exploration of personal values, ethical principles and beliefs?
* Do students engage in discussions about moral problems?

**Assess**

Recognising that while it is difficult to assess or judge whether or not students would act ethically when faced with real life ethical decisions, and whether or not they will be socially responsible; whether or not the students have the tools to make ethical decisions and act socially responsibly can be assessed.

* Is the requirement to show patterns of moral awareness, decision-making, intent, and action embedded in activities and assignments?
* Do assignments require students to identify two or more ethical dilemmas when considering problems/situations/challenges?
* Do assignments require recognition of ethical issues and the identification of conflicting positions that may arise in some situations
* Do assignments/task require the evaluation of the roots of students’ reactions to plurality and difference
* Is intereaction with others in groups and teams in ways that successfully contribute to working relationships and the achievement of stated goals identified in rubrics and grading criteria
* Do assessments require that difference and diversity is approached with empathy, positivity and an open mind

Inquiry and Analysis  
  
**Inquiry and Analysis**: the ability to use a systematic process for exploring issues and challenges through the collection and analysis of evidence gained by breaking complex topics or issues into relevant and simpler parts.

## Benchmark for Achievement

The students have the ability to explore issues by generating questions and breaking complex topics into relevant parts in order to arrive at informed conclusions, judgements, and decisions. They are able to use different ways to break complex topics or issues into manageable parts to better understand the whole issue, problem or challenge

## Levels of Achievement

Asking questions and managing responses to these questions are two different, yet related, processes that are critical to the achievement of literacy in the area of inquiry and analysis. Students literate in this area identify and embrace complex issues with skills and knowledge of the processes involved and find insightful answers that are comprehensive and relevant to the challenge presented.

**Basic**

* Limited or no ability to frame or address a research question, hypothesis and/or problem, is evident.
* There is no evidence of the awareness of context with analysing an issue or looking for information about a topic
* Information is presented without sources or mostly irrelevant sources, representing limited points of view/ approaches.
* When evidence is presented to support an opinion or stance it is not always organised and/or is unrelated or not focused.
* The limitations and/or implications of an analysis are not clearly understood

**Intermediate**

* There is evidence of the abilility to frame and/or address a research question, hypothesis and/ or problem.
* Has some knowledge of relevant context when analyzing an issue or looking for information about a topic,
* Assembles and selects pertinent information from relevant sources representing various points of view/ approaches.
* Organizes evidence to reveal important patterns, differences, or similarities related to the analysis of a topic, responding to a question or supporting a stance.
* Draws logical conclusions and offers offers solutions supported by evidence.
* Discusses relevant and supported limitations and implications of a response or opinion.

**Advanced**

* Clearly frames and addresses a research question, hypothesis and/or problem.
* Has strong knowledge of relevant context when searching for and choosing information.
* Assembles, reviews and synthesizes pertinent information from many relevant and appropriate sources with diverse points of view.
* Presents organised evidence that effectively reveals important patterns, differences or similarities
* States a conclusion that is a logical extrapolation from the inquiry findings.
* Insightfully discusses in detail relevant and supported limitations and implications related to a topic or issue.

Guiding Questions

**Teach**

* Are students taught processes or provided models for inquiry and analysis?
* Is questioning used, when teaching, to guide students to think deeply?
* Are inquiry and analysis defined and discussed in class?
* Are different types of inquiry (e.g. confirmation, structured, guided and open inquiry) explained?

**Practice**

* Are students encouraged and given an opportunity to critique and question content/resources and ideas/assumptions?
* Do students receive feedback, in class, on the relevance of the questions they ask and the evidence they give when coming to conclusions?
* Are students encouraged to reflect on what they are learning?

**Assess**

* Do assignments and activities clearly describe the requirement for inquiry and analysis?
* Are assignments assessed based on level of analysis?
* Do assessments require students to organise, synthesize, interrelate, compare and present information to address a topic or question or to test a hypothesis.
* Are skills related to inquiry: formulating questions, identifying multiple sources of information representing different perspectives, analyzing the quality and reliability of sources used to communicate and defend a position included in the rubric used for grading assignments?

# Critical Thinking and Problem Solving

**Critical Thinking and Problem Solving:** the ability to address complex issues and problems by acquiring, processing, analyzing, and interpreting information to make informed judgments and decisions.

## Benchmark for Achievement

Students are aware of personal assumptions, are able to externalize any related personal assumptions, questions some of these assumptions, questions the validity of the material considered and reache a conclusion that is logically tied to the information that has been examined and assessed. The students take mental risks by exploring different forms of reasoning.

Levels of Achievement  
Critical thinking and problem solving focuses on developing habits of asking questions, deliberating and weighing responses, and evaluating the relevancy of the responses to the questions prior to formulating a response or conclusion. Literacy in this area also requires students to use the relevant information gathered to design, evaluate, and implement varying strategies before deciding on one that will answer the question or achieve the desired goal.

**Basic**

* Viewpoints of experts are taken as fact, without question.
* Shows an emerging awareness of present assumptions (sometimes labels assertions as assumptions).
* Specific position (perspective, thesis/ hypothesis) is stated, but is simplistic and obvious.
* Begins to identify some contexts when presenting a position.
* Demonstrates a limited ability in identifying a problem statement or related contextual factors.
* Identifies one or more approaches for solving the problem that do not apply within a specific context.
* Proposes a solution/ hypothesis that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
* Evaluation of solutions is superficial (for example, contains cursory, surface level explanation) and includes the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.
* Implements the solution in a manner that does not directly address the problem statement.
* Reviews results superficially in terms of the problem defined with no consideration of need for further work

**Intermediate**

* Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.
* Identifies multiple approaches for solving the problem, only some of which apply within a specific context
* Specific position (perspective, thesis/ hypothesis) acknowledges different sides of an issue.
* Proposes one or more solutions/ hypotheses that indicates comprehension of the problem. Solutions/ hypotheses are sensitive to contextual factors as well as the one of the following: ethical, logical, or cultural dimensions of the problem.
* Evaluation of solutions is brief (for example, explanation lacks depth) and includes the following: considers history of problem, reviews logic/ reasoning, examines feasibility of solution, and weighs impacts of solution.
* Implements the solution in a manner that addresses the problem statement but ignores relevant contextual factors.
* Reviews results in terms of the problem defined with little, if any, consideration of need for further work.

**Advanced**

* Conclusions and related outcomes (consequences and implications) are logical and reflect student’s informed evaluation and ability to place evidence and perspectives discussed in priority order
* Information is taken from source(s) with enough interpretation/ evaluation to develop a comprehensive analysis or synthesis.
* Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.
* Thoroughly (systematically and methodically) analyzes own and others' assumptions and carefully evaluates the relevance of contexts when presenting a position.
* Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.
* Specific position (perspective,thesis/ hypothesis) is imaginative, taking into account the complexities of an issue. Limits of position (perspective, thesis/ hypothesis) are acknowledged. Others' points of view are synthesized within position (perspective, thesis/ hypothesis).
* Identifies multiple approaches for solving the problem that apply within a specific context.

## Guiding Questions

**Teach**

* Are the attributes and behaviours of a critical thinker discussed?
* Are strategies for critical thinking explained and discussed?
* Is a framework or model for critical thinking taught, demonstrated or provided as a guide?
* Are ways to assess the impact of the results of the analysis on a final solution or decision explained?
* Are students taught to explore all aspects of an issue, differentiate relevant from irrelevant information, and then come to a rationalized conclusion?

**Practice**

* Do learning activities enable students to practice asking questions without fear of reprisal or judgment?
* Are there opportunities for students to identify the various sides of an issue?
* Are students encouraged to identify and use a variety of thinking skills to anticipate and solve problems?
* Do students compare their own thinking process against existing models of critical thinking?
* Are students encouraged to diligently think through arguments they do and do not support?
* Do students have opportunities to practice solving problems that have more than one correct answer?

**Assess**Critical thinking can be demonstrated in assignments that require students to complete analyses of text, data, or issues.

* Are students asked to compare, contrast and provide supportive rationale for their responses?
* Do assignments require students to analyze, interpret, present and evaluate information
* Do assignments require students to interpret and analyze information and examine assumptions?
* Do students engage in identifying several solutions to problems and critique the strengths and weaknesses of proposed solutions?
* Are assignments/probles/cases or situations explored from the perspective of different contexts and the perspective of different viewpoints?

[An excellent guide for promoting and assessing critical thinking](https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/cross-discipline-skills/promoting-assessing-critical-thinking)

# Intercultural Knowledge and Global Perspective

**Intercultural Knowledge and Global Perspective:** The ability to explore global issues and challenges from diverse worldviews that respects differences, while informing and broadening individual views and interacting effectively in a variety of cultural contexts.

## Benchmark for Achievement

The student successfully identifies their own cultural rules and biases and identifies cultural differences between themselves and others. They also are aware of misunderstandings that can occur based on these differences and are able to identify other global perspectives while articulating a value preference for their own position.

They are able to collaborate respectably with others of different backgrounds and cultures; make connections between and among local and global issues and discuss global challenges. The graduates can identify their personal cultural patterns, compare and contrast them with those of others and discuss ways to adapt to diverse cultural contexts. They use critical and analytical skills to evaluate assumptions and challenge existing structures in *ways that respect diversity and foster equity and inclusivity focused on a pluralistic worldview.*

## Levels of Achievement

**Intercultural Knowledge and Global Perspective** are two related concepts within this area of literacy. Intercultural Knowledge is the basis for the cognitive, affective, and behavioral skills and characteristics that support meaningful interactions in a variety of cultural contexts. Beyond mere exposure to culturally different others, students and graduates have opportunities to meaningfully engage those others and to explore the role that culture plays in learning. Based on the achievement of Intercultural Knowledge, the development of a Global Perspective can occur when students have meaningful opportunities to explore global challenges and collaborate with others of diverse cultures. Intercultural Knowledge, which assists in the development of a ***Global Perspective***, is based on the principle that the world is a collection of interdependent yet inequitable systems. Achieving a Global Perspective enhances students’ sense of identity, community, ethics, and perspective-taking.

**Basic**

* Shows minimal awareness of own cultural rules and biases and are uncomfortable with identifying possible cultural differences with others.
* Has a surface understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.
* Views the experience of others but does so through own cultural worldview.
* Has a minimal level of understanding of cultural differences in verbal and nonverbal communication; is unable to negotiate a shared understanding.
* States minimal interest in learning more about other cultures.
* Receptive to interacting with culturally different others. Has difficulty suspending any judgment in her/ his interactions with culturally different others, but is unaware of own judgment.Intermediate

**Intermediate**

* Identifies own cultural rules and biases (e.g. with a strong preference for those rules shared with own cultural group and seeks the same in others.)
* Demonstrates partial understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.
* Identifies components of other cultural perspectives but responds in all situations with own worldview.
* Identifies some cultural differences in verbal and nonverbal communication and is aware that misunderstandings can occur based on those differences but is still unable to negotiate a shared understanding.
* Asks questions about other cultures and seeks out answers to those questions.
* Expresses openness to most, if not all, interactions with culturally different others. Has difficulty suspending any judgment in her/ his interactions with culturally different others, and is aware of own judgment and expresses a willingness to change.

**Advanced**

* Articulates insights into own cultural rules and biases (e.g. seeking complexity; aware of how her/ his experiences have shaped these rules, and how to recognize and respond to cultural biases, resulting in a shift in self-description.)
* Demonstrates sophisticated understanding of the complexity of elements important to members of another culture in relation to its history, values, politics, communication styles, economy, or beliefs and practices.
* Interprets intercultural experience from the perspectives of own and more than one worldview and demonstrates ability to act in a supportive manner that recognizes the feelings of another cultural group.
* Articulates a complex understanding of cultural differences in verbal and nonverbal communication (e.g., demonstrates understanding of the degree to which people use physical contact while communicating in different cultures)
* Asks complex questions about other cultures, seeks out and articulates answers to these questions that reflect multiple cultural perspectives.

## Questions to Guide Mapping

**Teach**

* Are students taught about ways that cultural diversity and bias are dealt with in different countries, and how this impacts people both in their personal lives and in professional practice?
* Are ways to consider issues and problems from a variety of social, economic, political, religious, ethical/moral, and/or cultural perspectives taught?
* Is the impact of culture on the development of specific approaches in the profession/discipline explored?
* Does the course include readings/articles from international journals, inter-governmental organizations, overseas newspapers, etc.?
* Are students examining ethical issues of globalization, such as social justice, equity, human rights, immigration, and other social, economic and/or political issues that involve a broad awareness of world trends (in any discipline).

**Practice**

* Are opportunities provided for students to meaningfully discuss cultural similarities and differences between various cultures in relation to the subject under consideration in the course?
* Are there opportunities to identify how their own cultural patterns / biases compare to those of other cultures and then identify areas between these cultural perspective / norms where there should be empathy and flexibility to ensure success of a project or assignment.
* Do discussion require that issues and challenges are explored from a wider perspective than their own?

**Assess**

* Assignments require the consideration of relevant / applied topics from a global perspective and not merely local.
* Students are required to provide explanations and solutions to local challenges / issues in such a way as to reflect the global nature of our world today.
* Students have the opportunity and are expected to identify how their understanding of own culture affects their view of the rest of the world and how this influences their global perspective.

# Digital Literacy

**Digital Literacy** refers to **the** knowledge and skills required tolocate, use, summarize, evaluate, create, and communicate information while using digital technologies and mobile platforms; and to engage safely, responsibly and ethically in online communities and networks.

## Benchmark for Achievement

Students use a variety of digital media applications, create a range of content with digital tools. They can use technology tools, legally and ethically, to facilitate communication, gain access to and assess diverse forms of information. They have the knowledge to engage in debate about the cultural and social issues related to the digital divide, digital access, the use of algorithms and processes guided by artificial intelligence.

## Levels of Achievement

Given the constantly evolving nature of technology tools, the required skills for achieving and maintaining digital literacy are also constantly evolving. In addition to being proficient in using a variety of digital media software applications and hardware devices, students must recognize and be able to discuss the implications and ramifications, especially in relation to privacy and social responsibility, in using and consuming digital media content; and must have the capacity to create content, in all its forms, with digital technology.

The [European Commison’s Digital Competences Framework for Citizens](https://joint-research-centre.ec.europa.eu/digcomp/digcomp-framework_en) (2022) which reflets and referenes many of the global digital literacy initiatives, has identified the key components of digital literacy in 5 areas:

1. **Information and Data** focus on the ability to, to locate and retrieve digital data, information and content while judging the relevance of the source and its content.
2. **Communication and Collaboration** involve the ability to interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity.
3. **Digital Content Creation** is about the ability to create and edit digital content; integrate digital content into an existing body of knowledge while understanding how copyright and licenses are to be applied. It includes the skills and knowledge to:
4. **Safety** focuses on the ability to protect devices, content, personal data and privacy in digital environments.
5. **Problem Solving** is essential to all aspects of digital literacy. This includes the skills and knowledge to identify and solve technical problems when operating devices and using digital environments and to assess problems and then identify, evaluate, select and use digital tools and possible technological responses and to solve them.

This section on Levels of Achievement, therefore, is presented differently from that of the other literacies in this guide. There are very specific technical skills and activities related to information and data literacy, communication and collaboration and digital content creation. The students must have these skills and be able to do specific tasks. The focus in this section is on these skulls and activities and not on levels of achievement. Safety and problem solving apply to any type of activity carried out through digital means. Elements of problem solving, for example, are present in all of the core literacies, but it is also necessary to highlight it as a specific area as it is vital to adoption of digital practices.

The following section outlines the essential skills and knowledge that must be addressed, for all 5 areas.

**Teach**

Are there opportunities for the students to acquire the skills and abilities required to:

* browse for, search, filter, locate and retrieve a variety of content types (data, information etc.)
* access and navigate between different sources of information
* differentiate between information, misinformation and disinformation
* use digital tools to evaluate the relevance and accuracy of sources and content
* retrieve data and information
* store, manage and organize content in a structured environment
* choose suitable digital communication tools for a given context
* share data, information, and digital content with others through appropriate digital technologies while using proper referencing and attribution practices
* adapt communication strategies to the specific audience and to be aware of “netiquette”
* create and manage one or multiple digital identities, while protecting one’s own reputation.
* recognise risks and threats in digital environments
* explain safety and security measures for digital environments
* protect personal data and privacy in digital environments
* explain how copyright and licenses apply to data, digital information and content

**Practice**

* Are students required to use different search engines to find resources for class discussions?
* Are there class/group activities to discuss the reliability and credibility of various sources and to differentiate between information, misinformation, and disinformation?
* Are thereclassroom discussions and debates on the impacts of misinformation and disinformation?
* Are there hands-on sessions working with online databases?
* Are there class activities that require the students to analyze the ways that digital services use a “Privacy policy” to inform how personal data is used discussed?
* Are there opportunities to debate ways to avoid health-risks and threats to physical and psychological well-being while using digital technologies explained?
* Are there discussions about ways to protect oneself and others from possible dangers in digital environments (e.g. cyber bullying)?
* Are online discussions and forums with guidelines on netiquette used in the course?
* Are there class discussions about creating and managing a digital identity?
* Are there discussions about scenarios related to online reputation management?
* Are there class activities where copyright is explaianed and different ways licenses may be applied to data, digital information and content?
* Are scenarios and examples that focus on ways to use digital technologies for social well-being and social inclusion included in class discussions? Do class discussion include information about the environmental impact of digital technologies and their use?

**Assess:**

* Do assignments/projects require students to source, filter, and retrieve information from the internet?
* Do assessments require navigating multiple digital platforms and retrieving specific information?
* Are there any assignments requiring students to evaluate the relevance and accuracy of sources and content?
* Do assessments focus on explaining the environmental impact of digital technologies and their use?
* Do group projects require the use of digital collaboration tools?
* Is student communication in online discussions and forums evaluated, with attention paid to netiquette?
* Do any assessemnts include digital identity, privacy, and reputation management scencarios?
* Are adherenceproper copyright protocols and adherence to licenses as they apply to data, digital information and content, part of the assessment criteira?
* Are students required to find techological solutions including selecting and using digital tools in their assesments?

\*\* It is important to highlight that digital technologies are continually evolving, and new technology tools are always being updated and added to those that are widely available. Therefore, the description of Digital Literacy must be updated frequently.

As digital technology tools grow and evolve, they also have the potential to impact the ways that the other literacies mentioned in this handbook are taught practiced and assessed.