

Joanna Wild, INASP Mary Omingo, AFELT

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2-3 Cambridge Terrace Oxford United Kingdom OX1 1RR Company registration number 04919576 Registered charity number 1106349 t +44 (0)1865 249909 info@inasp.info www.inasp.info

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### **Executive Summary**

Students need to be equipped with critical thinking and problem-solving skills to contribute fully to employment and wider society when they graduate. It is therefore very important for universities to understand the types of skills that employers want to see from graduates and the skills gaps that currently exist.

The Transforming Employability for Social Change in East Africa (TESCEA) partnership, which is working with universities in Tanzania and Uganda, recognized the need to understand this issue deeply. The TESCEA partners therefore conducted a literature review to identify key skills and skills gaps identified worldwide, with a strong focus on literature from Sub-Saharan Africa.

The literature review was used to create clusters of key skills, which were then mapped onto the Taxonomy of Significant Learning framework to create a skills matrix.

This skills matrix was integrated into the methodology for TESCEA course redesign workshops to help students acquire desired skills and dispositions alongside subject content knowledge. It is now being used to facilitate development of course-level outcomes and, at the lesson-planning level, to help teachers pull more granular skills, abilities and dispositions into the class-level learning outcomes.

















TESCEA is funded by the UK's Department for International Development (DFID) as part of DFID's SPHEIR (Strategic Partnerships for Higher Education Innovation and Reform) programme to support higher education transformation in focus countries in Sub-Saharan Africa, Asia and the Middle East.



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### **Introduction**

The Transforming Employability for Social Change in East Africa (TESCEA) partnership (see box) is helping teaching staff in four universities in Tanzania and Uganda to equip graduates better with the critical thinking and problem-solving skills that they need to contribute fully to employment and wider society after university.

To do this effectively it is very important to understand the types of skills that employers want to see from graduates and the skills gaps that currently exist. However, there is little formal published literature on these desired skills and current gaps. There is also a critical lack of research on graduate employability in Africa, with most of the research originating from the UK, US and Australia (British Council, 2016)<sup>1</sup>.

In 2018, at the start of the three-and-a-half-year TESCEA partnership, the eight partners<sup>2</sup> conducted a review of literature in their countries and worldwide related to graduate skills and employment. This literature was analysed to develop a skills matrix, which fed into the work by INASP and AFELT to guide the course redesign process within the partnership.

This paper describes how the literature review was used to develop a skills matrix and the subsequent application of this matrix in course redesign within the four universities in the TESCEA partnership. The skills matrix is also part of the development of a wider approach for transforming higher education for employability and social change in East Africa. We aim to publish a summary of the findings of the literature review in a subsequent paper.

### **ABOUT TESCEA**

Transforming Employability for Social Change in East Africa (TESCEA) is helping young people in Tanzania and Uganda to use their skills and ideas to tackle social and economic problems. With partners in Tanzania, Uganda and Kenya, TESCEA supports universities, industries, communities and government to work together to create an improved learning experience for students – both women and men. This improved learning experience fosters the development of critical thinking and problem-solving skills, and allows for practical learning beyond the classroom that improves a graduate's employability.

The TESCEA partnership is led by INASP (UK), working with Mzumbe University (Tanzania), University of Dodoma (Tanzania), Gulu University (Uganda), Uganda Martyrs University (Uganda), Association for Faculty Enrichment in Learning and Teaching (Kenya), LIWA Programme Trust (Kenya) and Ashoka East Africa (Kenya).

### Identifying graduate employability skills

Identification of the skills that employers look for in graduates began with a robust literature review across the partnership.

The purpose of the desk research was:

 To investigate what is already known about employer and community expectations of graduate critical thinking and TESCEA defines employability as not limited to employment but about a person having the mindset, potential, attributes, skills, purpose, ability and agility to define their path and create their own future.

problem-solving skills, capabilities and dispositions in East Africa.

2) To map the current landscape of university activity around developing critical thinking and problem-solving skills, capabilities and dispositions in East Africa and beyond.

<sup>&</sup>lt;sup>1</sup> Universities, Employability and Inclusive Development, British Council, 2016 <a href="https://www.britishcouncil.org.gh/programmes/education/internationalising-higher-education/universities-employability-and-inclusive">https://www.britishcouncil.org.gh/programmes/education/internationalising-higher-education/universities-employability-and-inclusive</a>

<sup>&</sup>lt;sup>2</sup> INASP (UK), Mzumbe University (Tanzania), University of Dodoma (Tanzania), Gulu University (Uganda), Uganda Martyrs University (Uganda), Association for Faculty Enrichment in Learning and Teaching (Kenya), LIWA Programme Trust (Kenya), Ashoka East Africa (Kenya)

### Literature review process

All eight partner organizations within the TESCEA partnership contributed to the literature review process, identifying relevant documents and adding them to a central Dropbox folder. The literature reviewed included not just academic papers but also university documents and publications from businesses.

Selection of materials for review was guided by a set of key research questions identified by Ashoka East Africa and INASP and shared across the partnership. The research questions (see box) considered definitions of critical thinking and problem-solving skills; what employers are looking for in graduates; what role universities are expected to play in the process of such skills development; and what challenges exist in developing such skills today.

Materials were reviewed by different partners from the organizations that identified the materials. This helped reduce potential bias from existing knowledge about a particular piece of work and also enabled cross-learning to take place, often across country borders.

We created an index for all partners to record the literature they identified. This helped us to see the scope of the literature identified and avoid duplication of literature. It also served as a guide to make sure that the geographical reach of the literature identified for the study was not too Global North-heavy.

109 papers were identified and given preliminary review. Of these, 99 were deemed relevant for inclusion in the analysis and 57 systematic reviews were conducted. 50 of the papers identified originated from or primarily focused on Global South countries, with 42 of those papers coming from Africa. The majority of the sources (90) were formal publications such as journal and conference papers, book chapters, research reports and academic theses. The remainder were more informal sources including project guides, policy briefs, presentations and web pages.

# RESEARCH QUESTIONS CONSIDERED IN LITERATURE REVIEW

- 1. How are critical thinking and problemsolving skills defined at the university level? What approaches do universities currently take to support the development of the critical thinking and problem-solving skills for employability?
- 2. What skills, abilities and dispositions do the employers (public and private sector) want/ value in graduates?
  - a. What skills, abilities and dispositions do employers consider most important?
  - b. What skills, abilities and dispositions are deficient amongst graduates?
- 3. What skills, abilities and dispositions do graduates need to support the generation of innovative ideas and solutions at the community level?
- 4. What skills, abilities, dispositions do graduates need to become successful social entrepreneurs?
- 5. How do the employers perceive the role of the universities in developing skills needed for employment and how do they perceive their own role?
- 6. What are the conducive/impeding factors to developing critical thinking and problem-solving skills in the universities?

### Review of identified literature

Literature were reviewed according to the research questions. Key points relating to student skills and methods and assessment approaches were collected in a centralized Dropbox folder using a standard template.

All partners contributed to the review process. However, the four university partners had many other tasks at the start of the project, including consultations with stakeholders to complement this work. Therefore, much of the reviewing was assigned to and conducted by INASP and Ashoka East Africa.

Following the collection and initial review of literature, INASP led a consolidation of the data with Ashoka East Africa acting as a critical friend. The data were sorted in a spreadsheet in four categories: skills/abilities; dispositions; teaching and learning strategies; and assessment strategies.

# Thematic organization

The next phase involved cleaning and amalgamation of the data around skills, abilities and dispositions to eliminate repetitions and arrive at skills clusters. This was to ensure that the output is digestible and usable at both course design and lesson planning level. We identified higher level skills and abilities to act as umbrella terms for a set of more granular skills (see box below).

We also identified the frequency with which different skills and dispositions were mentioned (see bar chart on the next page) to give us an idea of possible prioritization in the course redesign.

### SKILLS AND DISPOSITIONS IDENTIFIED

Analytical skills (42)

Teamwork and interpersonal skills (27)

Self-development (24)

Self-management (21)

Communication skills (20)

Organizational and management skills (16)

Ability to exercise judgement and logic/Reasoning skills (16)

Leadership and ability to push for change (12)

Creative/innovative/flexible disposition and thinking skills (11)

Ability to manage career (10)

Dealing with uncertainty, ambiguity and risk (8)

Taking the initiative (7)

Reflective thinking (7)

Ability to think open-mindedly and entertain diverse viewpoints (7)

Numeracy and ICT skills (7)

Innovative thinking (7)

Ethical and sustainability thinking (6)

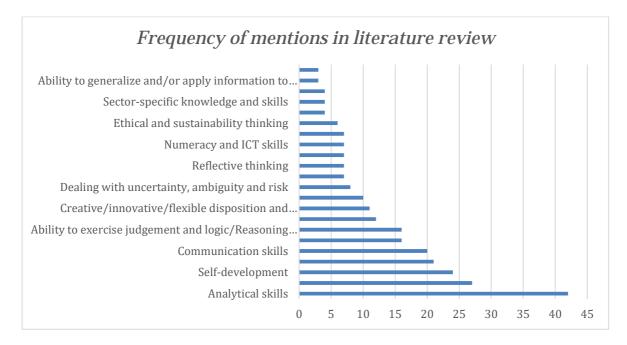
Conflict management and negotiation skills (4)

Sector-specific knowledge and skills (4)

Ability to integrate theory and practice (4)

Ability to generalize and/or apply information to other situations (3)

Ability to analyse and recognize the root causes of social and other problems (3)



The clustering of skills under the umbrella terms was carried out with the help of external experts in the areas of critical thinking and entrepreneurship - Dr Rebecca Schendel, Prof Diana Laurillard and Dr Rachel Wilde. We arrived at three categories of clusters: critical thinking and solving ill-structured problems; entrepreneurship and social entrepreneurship; and communication, teamwork and conflict management.

These were then reviewed and refined by the partnership. They were also complemented with the findings from the local stakeholder consultations led by the Joint Advisory Groups established by each university. This helped to identify the most relevant skills for each country and university context.

The clusters are included in Annexes 1 to 3.

### **Development of a skills matrix**

Once the clusters were developed, these were mapped against the Taxonomy of Significant Learning by Dee Fink (2013)<sup>3</sup> to produce a skills matrix for the use in the course redesign workshops (Annex 4). INASP and AFELT met in a half-day session to work jointly on the mapping. The aim was to integrate the desired graduate skills within a pedagogical framework that would quide the teachers in redesigning their courses.

Use of the Taxonomy of Significant Learning was proposed by AFELT for two reasons. Firstly, the framework encourages transformative learning approaches. Secondly, it recognizes that gaining experiential skills and growing as a person (dispositions, attitudes) are of equal importance to cognitive learning outcomes.

The taxonomy recognizes six kinds of learning: foundational knowledge; application; integration;

Foundational knowledge

Learning to learn

Fink's
Taxonomy of Significant Learning

Caring

Human dimensions

human dimension; caring and learning how to learn. The taxonomy is not hierarchical but rather relational and even interactive. Dee Fink (2013: 38), states that when a course or learning experience

<sup>&</sup>lt;sup>3</sup> A Self-Directed Guide to Designing Courses for Significant Learning, L. Dee Fink, 2003 <a href="https://www.deefinkandassociates.com/GuidetoCourseDesignAug05.pdf">www.deefinkandassociates.com/GuidetoCourseDesignAug05.pdf</a>

can promote all six kinds of learning, the learner has had a learning experience that can be deemed significant.

In the mapping exercise we decided where each skill cluster fits within those six kinds of learning. For example, self-management and communication skills were placed under 'human dimension', which involves learning about oneself and others. Similarly, analytical skills were placed under 'application', which is about critical, creative and practical thinking, while dealing with uncertain future was placed under 'integration', which is about connecting ideas, learning experiences and realms of life.

### **Application of the skills matrix**

The skills matrix was then integrated into the methodology for TESCEA course redesign workshops. The aim was to ensure that lecturers facilitate students' learning in such a way that students acquire desired skills and dispositions alongside subject content knowledge.

The skills matrix is applied at two critical points in the process of course redesign: Firstly, it facilitates development of course-level outcomes. For each of the concepts to be taught in a course, teachers develop learning outcomes representing each of the six kinds of learning. They use the skills matrix to ensure that relevant skill categories are being pulled into the course-level learning outcomes. Secondly, at the lesson-planning level, teachers pull more granular skills, abilities and dispositions under each skill category into the class-level learning outcomes. They then design teaching and learning activities and assessment types that will support students in developing all learning outcomes, including experiential skills and dispositions.



### THE SKILLS MATRIX IN ACTION

Course redesign workshops within TESCEA are busy, intense sessions that take place over many days. They facilitate lecturers to examine how they are teaching particular courses within their degree programmes, what the learning objectives are and how to equip students with broader critical thinking and problem-solving skills along the way.

The workshops work through four main themes within courses: the concepts being taught; learning outcomes for each concept; assessment; and teaching and learning strategies. Typically, a course redesign workshop might look at one of these themes each day to build up a revised course.

The skills matrix adds an important additional lens to course redesign. It helps teaching staff to think about how the various components of a redesigned course are contributing to the development not just of subject knowledge but also the other skills that graduates need when they leave university.

There are different ways to apply this lens. For example, in Mzumbe University in Tanzania, the skills matrix was applied after staff had summarized points within the four themes for their course on large sheets of paper. Participants then revisited these four themes and added sticky notes to show where and how key skills relating to critical thinking and problem solving could be addressed. An alternative approach was taken in Uganda Martyrs University, where "Skills" or "Competencies" was included as a fifth theme within the course redesign process so these wider skills were considered at the same time as the concepts, outcomes and approaches.

In addition to workshop facilitators, TESCEA course redesign workshops include so-called multipliers. These are local staff who have participated in previous courses and then been trained to take on a further role of supporting scale up of the work. We recognized the importance of engaging not just course facilitators but also the teaching and learning multipliers in applying the skills matrix. This should help the wider skills needs to become more embedded in the processes beyond the lifetime of TESCEA.

### **Learning and reflections**

The literature review was an extensive process involving eight partners across four countries. The subsequent development of the skills matrix also required international cooperation, as well as the involvement of external consultants who were experts in particular aspects of this work.

Involving a range of partners and others has significant benefits – bringing a range of perspectives, a closer alignment to the eventual beneficiaries of this work (students, employers and other stakeholders), and access to a richer pool of content from the countries involved. We recognized in

TESCEA – in an observation that was echoed in our literature review - that disconnects between higher education and employment are worldwide problems. We also recognized that some issues of skills gaps are specific to East Africa, and to specific sectors and parts of East Africa. This is why it was important to have large component of African literature in the review. It was also why the local consultation with stakeholders was important in helping to prioritize skills to bring into curricula at a local level.

"I now have learned how to say no, discuss, disagree and to compromise on issues that affect society in general. I think I have gained some form of personal freedom and the willingness to lead. I can now speak freely without any fear of being a female. I would say that I have experienced self-transformation as a learner."

Student at University of Dodoma, Tanzania

However, working across so many partners also brings challenges. The process of literature review was long and complicated, relying on

shared understanding of the objectives of the work and the intended outcomes. It also relied on the capacity of all partners to complete the allocated work within the constraints of a time-pressured project.

We encountered some challenges relating to consistency in how different terms and key concepts relating to skills gaps are understood. For example, we needed to emphasize that problem solving is more about solving ill-structured problems than about well-defined problems.

We also recognized the inter-relatedness of some of the skills within the skillsets – for example there are some skills that are important for both critical thinking and entrepreneurship; there were fuzzy boundaries between different umbrella concepts. As a result, we experimented with different ways to



organize the findings, initially presenting the key skills within umbrella themes (Annexes 1 to 3) before adapting the approach to align with the Taxonomy of Significant Learning (Annex 4).

We recognize that we can cluster the results in different ways. Mapping against the Taxonomy may not be perfect but we found that it works well for not overwhelming lecturers with too many frameworks. It also assists with bringing concepts together and integrating this with writing learning outcomes.

However, development of the skills matrix as a theoretical tool was only part of the overall task within this aspect of the work. To be effective it needs to move from theory to practice. Here there can be another challenge of working across many partners. Different people have different approaches and working cultures, which can mean different levels of emphasis on the skills matrix within the process. In addition, the course redesign sessions are very full of new concepts and time is limited. This can make it hard to give the skills matrix sufficient emphasis.

### **Next steps**

Identifying skills gaps and using these to develop a skills matrix was an important step in helping universities redesign their courses in a way that helped students gain the skills that employers are looking for.

Our next stage will be unpacking how the skills matrix has been used within TESCEA course redesign sessions and exploring, within our approach to adaptive programme design, how to build on these lessons going forward.

This approach, along with other approaches being developed through the TESCEA partnership, will form part of the development of an East Africa model for helping higher education institutions equip their graduates for employment and social change.

"After reading the pedagogy of the oppressed and going through TESCEA training, I felt strongly that all along I had been denying my students the right to learn. Therefore, I would do what I learn more on transformative teaching and learning in order to help students unlock their potentials to become critical thinkers and problem solvers in order to facilitate change in the communities they serve and the nation at large."

Lecturer at Mzumbe University, Tanzania

#### About the authors

Joanna Wild is the lead on technology-enhanced capacity development at INASP. She acts as curriculum and online learning advisor for the TESCEA partnership. She can be contacted at jwild @inasp.info.

Dr Mary Omingo is a founder member of AFELT. She is AFELT's course redesign lead within the TESCEA partnership. She can be contacted at omingomary@gmail.com.

Photos in this paper were taken at a course redesign workshop at Uganda Martyrs University in late 2019.

















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# Annex 1: Critical thinking and solving illstructured problems skills cluster

### **Identifying problems**

### **Identifying pertinent information**

- Identification of information
- Ability to determine whether or not information is relevant to a situation

### Analysing the claims/arguments of others

- Evaluation of arguments
- Challenging others' assumptions
- Rendering accurate judgements about specific things and qualities in everyday life
- Ability to exercise judgement
  - Judging the value judgments of others
  - Judging the observations of others
- Knowledge of methods of logical inquiry & reasoning
  - Ability to identify logical relationships between propositions
  - Ability to recognize the existence of logical relationships between propositions
- Skills to apply methods of logical inquiry & reasoning

### Interpreting and evaluating information

- Ability to interpret data
- Ability to recognize potential sources of bias
- Ability to test information
- Ability to recognise the hidden/unstated assumptions and values underlying information
- Ability to appraise evidence
- Skills of inference (i.e. to deduce, judge deductions, induce, and judge inductions)
- Ability to break down a situation into its component parts
- Ability to appraise and evaluate statements
- Ability to judge credibility and reliability of a source
- Cognitive skills (such as abstraction and the ability to differentiate theory from evidence)
- Ability to conclude and generalise from results
- Ability to identify errors in presented information
- Ability to recognize whether or not information can be generalised and/or applied to other situations
- Ability to recognize when there is a lack of information
- Ability to evaluate whether or not information is connected and, if so, whether the data is conflicting or complementary
- Ability to evaluate whether or not information supports or contradicts an argument

### Making justified arguments

- Ability to synthesize information (which involves integration of new knowledge and identification of patterns)
- Ability to draw conclusions
- Knowledge of methods of logical inquiry & reasoning
- Skills to apply methods of logical inquiry & reasoning
- Reasoning verbally (especially in relation to concepts of likelihood and uncertainty)
- Ability to draw on valid evidence when formulating a decision
- Ability to put to test the generalization and conclusions at which one arrives

# Applying information to practical work and/or everyday life

- Turning theoretical work into 'real solutions'
- Understanding the impacts of decision on individuals, organizations and society
- Creation of new possibilities and solutions (based on existing knowledge)

### **Necessary dispositions**

- Valuing ideas
- Willingness to break free from established structures
- Curiosity/inquisitiveness
- Ability to analyse evidence and respond flexibly
- Fair mindedness
- Desire to test one's own conclusions, submit one's own ideas to a process of critique, challenge one's own assumptions
- Trust of reason
- Propensity to seek reason
- Creativity
- Adaptability and flexibility
- Dealing with uncertainty, ambiguity and risk; seeing a problem as having a right or wrong answer, acknowledging

### 'Thinking about thinking'

Metacognitive strategies that allow for control over the thinking process

# Annex 2: Entrepreneurship and social entrepreneurship skills cluster

### Reflective thinking and problem-solving

- Learning through experience (cognitive ability to recognise and recall salient events of the experience and learn from it)
- Reflective thinking
- Problem-solving

### Creativity/innovation

- Creative thinking
- Integrative thinking
- Design, invent and innovate (new products, services, business models, interventions and technologies)
- Ability to engage in innovations
- Ability to adapt and adopt emerging/evolving technologies
- Valuing ideas

### Organizational and management skills

- Planning skills/ability to plan
- Management skills
- Organisational skills/ability to organize
- Time management
- Project management skills
- Project skills

#### **Teamwork and interpersonal skills**

- Team work and working with others (knowledge and skills to work as a team)
- Cooperation
- Interpersonal skills
- Ability to work in teams/team orientation
- Sociability
- Working collaboratively

### Leadership and ability to push for change

- Mobilising others
- Vision
- Mindset to transform ideas/challenges into opportunities to be explored
- Ability to start value-creating initiatives
- Capacity to push for change even against resisting existing structures such as power relations and vested interest
- Being transformative to re-invent organizations and communities
- Capacity to envision future and induce social change in communities
- Taking initiative
- Ability to envisage new realities and making them
- Leadership skills

### **Necessary dispositions**

- Openness towards new and untraditional approaches
- Motivation
- Self-awareness
- Self-efficacy
- Coping with risk, ambiguity and uncertainty
- Willingness to break free from established structures
- Perseverance

### Social entrepreneurship

# Ability to analyse and recognize the root cause of social problems

- Awareness and in-depth understanding of existing structures
- (Ability to?) understand root causes of social problems which are not very obvious
- Capacity to recognize and understand deep structures that are the cause of socially undesirable equilibrium

### **Ethical and sustainable thinking**

- Ethical thinking
- Sustainable thinking
- Professional ethics, skills and attitudes to work in multicultural and global environments
- Ethical awareness
- Responsible citizenship

# Annex 3: Communication, teamwork and conflict management skills

### Communication

- Oral communication skills
- Written communication skills
- Ability to comprehend and use language with accuracy, clarity and discrimination
- Ability to communicate effectively to various audiences
- Knowing how to represent one's skills and abilities in a way that is attractive to employers or clients

### **Teamwork and interpersonal skills**

- Cooperation
- Interpersonal skills
- Ability to work in teams/team orientation
- Knowledge and skills to work as a team
- Sociability
- Working collaboratively
- Interdisciplinary thinking

### **Negotiation and conflict management**

- Negotiation skills
- Conflict management skills
- Conflict resolution skills

# **Annex 4: TESCEA skills matrix**

Categories	Headline skills, capabilities & dispositions	Skills/ capabilities/ dispositions
Foundational Knowledge	<ul> <li>What key information (e.g., facts, terms, formulae, concepts, principles, relationships, etc.) is/are important for students to understand and remember in the future?</li> <li>What key ideas (or perspectives) are important for students to understand in this course?</li> </ul>	<ul> <li>Building a knowledge base</li> <li>e.g.</li> <li>Ideas students will understand (e.g., theories, concepts, approaches, perspectives, and other broad themes in the course)</li> <li>Information to apply in ill-structured problem-solving (e.g., facts, and other kinds of core knowledge).</li> </ul>
Application	<ul> <li>What kinds of thinking are important for students to learn?</li> <li>Critical thinking, in which students analyse and evaluate</li> <li>Creative thinking, in which students imagine and create</li> <li>Ill-structured problem-solving and making decisions</li> </ul>	<ul> <li>Selecting appropriate information</li> <li>Ability to gather information</li> <li>Ability to identify pertinent information</li> <li>Ability to determine whether (or not) information is relevant to a situation</li> </ul> Evaluating and interpreting information <ul> <li>Ability to interpret information</li> <li>Ability to recognize potential sources of bias</li> <li>Ability to recognize the hidden/unstated assumptions and values underlying information</li> <li>Ability to judge credibility and reliability of a source</li> <li>Ability to identify errors in presented information</li> <li>Ability to recognize when there is a lack of information</li> <li>Ability to recognize whether (or not) information can be generalized and/or applied to other situations</li> </ul>

### Analysing the claims/arguments of others

- Ability to evaluate arguments
- Challenging others' and one's own assumptions
- Ability to exercise judgement
- Acknowledging multiple perspectives and that these should be supported by reasons

### Making sound arguments and decisions

- Ability to synthesise information
- Ability to apply methods of logical inquiry and reasoning
- Ability to draw on valid evidence when making a decision, formulating an argument or drawing a conclusion
- Ability to put to test the generalization and conclusions at which one arrives

### **Creativity and innovation**

- · Desire to experiment
- Ability to analyse, adapt and replicate latest thinking, ideas, tools, products and processes
- Ability to apply skills, experience and practices to new contexts
- Ability to recognise and take advantage of opportunities
- Ability to anticipate and respond to change [second order skill]
- Ability to question and challenge accepted practices [second order skill]

### Integration

What connections (similarities and interactions) should students recognize and make...:

- Among ideas within this course?
- Among material in this course and the students' own personal, social, and/or work life?

### Interconnected thinking

- Ability to make connections between ideas, perspectives and issues within the course.
- Ability to draw on local-global levels and perspectives

### Applying information to personal, social and/or work life

- Translating theory into practical solutions
- Ability to apply knowledge to solve day to day challenges
- Ability to identify problems

- Ability to identify salient features contributing to a problem
- Ability to view a problematic situation from different perspectives [second order skill]
- Ability to judge and evaluate different options and consequences [second order skill]

### Networking

- Ability to map a network of contacts
- Ability to use network to make new contacts
- Ability to identify useful skills, knowledge, experience from network

### Dealing with an uncertain future

- Ability to analyse past and future trends
- Ability to make projections
- Ability to adapt to changing circumstances
- Awareness and in-depth understanding of existing power structures [second level skill]

Ability to envisage and make new social realities [second order skill]

### **Human Dimensions**

What could, or should students learn about themselves?

What could, or should students learn about understanding others and/or interacting with them in a positive and productive way?

### **Self-management**

- Self-confidence
- Resilience
- Positivity
- Determination
- Sense of responsibility
- Coping with risk, ambiguity and uncertainty

#### **Teamwork**

- Knowledge of how effective teams function
- Knowledge of personal strengths and weaknesses to contribute to or manage within a team
- Ability to evaluate personal contributions
- Confidence to share ideas and voice opinions

• Ability to reflect on strengths and weaknesses of a team [second order skill]

### Interpersonal skills

- Ability to establish and agree shared goal/s
- Ability to actively listen
- Value the contributions of others
- Ability to compromise
- Ability to develop trust (e.g. through agreeing division of labour and delivering agreed tasks)

### Leadership

- Ability to conceive of and articulate a vision
- Ability to take initiative
- Ability to inspire and motivate others with vision [second order skill]

#### Oral and written communication

- Ability to plan and deliver/produce a clear and logical oral presentation/written communication
- Ability to organise thoughts and respond appropriately and with clarity to questions or instructions
- Ability to exercise judgement regarding length, tone and content of an oral presentation or written communication
- Ability to adapt communication effectively to various audiences [second order skill]
- Knowing how to represent one's skills and abilities in a way that is attractive to employers or clients [second order skill]

### **Negotiation and managing conflict** [second order skills]

- Ability to understand another person's point of view
- Ability to understand and control personal and/or emotional responses
- Confidence to discuss difficult topics
- Ability to articulate differing views or perspectives

### Caring

What changes/values do you hope students will adopt related to this subject? Feelings? Interests? Ideas?

#### Social awareness

- Embracing cultural and social diversity
- Respect for difference
- Ability and desire to anticipate, recognize and meet the needs of others
- Professionalism to work in multicultural and global environments

### Commitment to positive social change at the community level

- Desire to improve the lives of others and contribute to the community
- Commitment to long term planning and solutions
- Ability to act as a catalyst for positive action and change [second order skill]
- Ability to consider consequences of own decisions and actions [second order skill]

# Learning How to Learn

What would you like for students to learn about:

- How to be good students in a course like this?
- How to learn about this particular subject?
- How to become a self-directed learner of this subject, i.e., having a learning agenda of what they need/want to learn, and a plan for learning it?

#### Self-direction

- Curiosity/inquisitiveness
- Self-efficacy
- Self-regulation
- Self-motivation
- Ability to develop more personalized approaches in learning
- Desire to listen and learn from others' ideas and opinions
- Perseverance

### Reflective thinking

- Understanding of personal strengths and weaknesses
- Ability to evaluate performance and use reflections to improve [second order skill]
- Learning through experience [sector skill]