Handbook for Curriculum Assessment

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Introduction

This handbook is primarily aimed at departments, faculties and programme committees that need qualitative and quantitative data to answer the question "How is our curriculum doing?"

Sometimes this kind of information-gathering exercise is precipitated by a sense that change is due. Perhaps your curriculum has been evolving naturally for many years doing its good work, but you're not sure what precisely its "good work" might be. For some departments, enrolment growth or other changes demand some introspection about what is hoped students will have learned after completing their studies. We've also had departments and whole faculties ask us to help with the "How is our curriculum doing" question several years after a major curriculum change to see if the intended objectives were achieved. As well, change is sometimes driven by the formal review processes at the undergraduate and graduate levels (either in anticipation of one or as a response to feedback from reviewers).

In the end it matters little what drives the introspection and feedback-seeking as long as stakeholders become engaged in the process. Done properly, curriculum assessment actually helps to seed a culture of engagement, an ethos of conscious and intentional reflection and transformation. Ours is not the only approach, but it has proven resilient and effective so far. What we can offer is a set of processes that have been eye-opening and engaging in our work with the academic units in which we have been involved. Elements of the overall approach have been very successful in isolation, but taken together, we feel strongly that they enrich the teaching and learning landscape in ways that few other activities can.

How to use this handbook

Including theory, application, supporting resources and a case study (it is real), the handbook presents a model that has been implemented, refined, and presented at education-related conferences. Whether you begin with the model or read the case study first, the figures and accompanying explanation are intended to provide a framework within which all else makes sense. Finally, the matrices and questionnaires are provided for your own use or adaptation.

Acknowledgements

A project like this can only come to fruition in a collaborative, committed environment. The authors would like to thank Teaching Support Services; Julia Christensen Hughes for her conceptual expertise, Louise Solda for countless hours acting as note-taker, Trevor Holmes for his keen editing and Doug Schaefer who provided his layout and design expertise with characteristic flair.

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Curriculum Assessment: An Overview

What is curriculum assessment?

Curriculum assessment is a process of gathering and analyzing information from multiple sources in order to improve student learning in sustainable ways.

Why bother assessing curriculum?

Curriculum assessment can serve several major purposes:

- To identify aspects of a curriculum that are working and those that need to change
- To assess the effectiveness of changes that have already been made
- To demonstrate the effectiveness of the current programme
- To meet regular programme review requirements
- To satisfy professional accreditations

How can the information gathered be used?

The information gathered as part of a curriculum assessment can be used to inform curriculum changes in several areas, including:

- Curriculum/Course Design
- Curriculum/Course Delivery
- Assessment
- Learning Environment
- Other

When is curriculum assessment effective?

Curriculum assessment efforts are generally effective when:

- Viewed as a comprehensive, integral, systematic, and continuous activity
- Viewed as means for self-improvement
- Measures are meaningful
- Multiple measures sources are used
- Results are valued, and are genuinely used to improve programs and processes
- Involves the participation and input of faculty, staff, and students
- Focuses on the programme, not on individual performance of educators

Who can act as information sources when assessing curriculum?

- Students (applicants, undergrads, grads, alumni)
- Faculty
- TAs
- Staff
- Employers
- Professional Associations (certification/accrediting bodies)
- Colleagues from similar programs elsewhere

What feedback methods can be used to assess curriculum?

Opinion Gathering

- Surveys
- Focus groups
- Interviews
- Department meetings

Testing

- Written
- Demonstration
- Pre and post
- Control group

Content Analysis

- Student and faculty journals
- Concept mapping
- Completed assignments/exams

Expert Advice

- Tours
- External reviewers
- Expert speakers

Archival Data

- Course outlines
- Course evaluations
- Student grades
- Past curricular reports

(some sections have been adapted from Selim, B and Pet-Armacost, J, 2004. Program Assessment Handbook, University of Central Florida)

Situating Curriculum Assessment Within a Curriculum Development Framework

Curriculum development can be thought of as a series of iterative steps. Figure 1 (on page 7) represents the ideal process for curriculum development. All of the steps involved in curriculum development will help each smaller step in the curriculum assessment process. The intent is to see the link between any individual course or even any one class in which a student might be engaged and the mission, needs and strengths of the programme itself.

Programme Needs & Strengths of the University/College/Programme

Consider this as the frame for the model. Everything within the curriculum development process is shaded by the needs for the programme and the strengths of the unit developing it. It is important to have an understanding of the strengths and opportunities presented by canvassing the interests and abilities of those who will be the educators. These strengths are put beside the needs of those students who might be motivated to participate in the programme. It is also important to take note of where the programme might lead for those graduates (i.e. employment, further studies, accrediting bodies, etc.). It is through this collaborative process that the mission of the programme is identified.

Success at this stage requires a reflective process whereby university faculty and administrators along with 'end users'--potential students, employers and subsequent university programmes – are consulted through the use of surveys, focus groups, department meetings, interviews, etc.

Programme Objectives/Competencies based on the 'Ideal Graduate'

In this stage, a picture of an ideal graduate is developed. What are the knowledge, skills, and values that the ideal graduate will possess? At what level of sophistication will the graduates be able to use them? Most often the attributes of the ideal graduate are identified at the same time as the 'Programme Needs & Strengths of the University/College/Programme.'

The challenge then is to convert the identified attributes identified above into specific, measurable (via qualitative and/or quantitative measures), and achievable outcomes. Here we articulate what the successful graduates will be able to do upon programme completion, in performance terms.

Typically these objectives are written by (under)graduate curriculum committee members and presented to faculty and administrators as appropriate. We suggest that that they be compared to professional association competencies where available, to research-based statements of institution-level outcomes (e.g. Evers, 1998), and to objectives at other institutions where similar and well-regarded programmes exist.

Types of Educational Experiences & Foundational Content & Areas of Specialization

At this stage, specific curriculum starts to get fleshed out. By making use of the programme objectives, the content expertise of faculty, and discipline-specific learning experiences endorsed as valuable, the programme is developed. At this stage it is useful to lay out an approximate structure of the programme, ensuring that educational experiences that are intended to foster the learning objectives are articulated. Experiences like capstone courses, tutorials, labs, practica, service learning, electives and seminars ought to be considered at this point. Once these experiences have been identified, it is time to think about sequence: which courses or what learning experiences will go in 1st, 2nd, 3rd, or 4th years? What pre-requisites and electives are appropriate? The traditional tendency in curriculum development is primarily to consider the content flow of the programme. However, by keeping an equal focus on the achievement of

the programme objectives, the larger picture of the vision for the ideal graduate and programme mission is kept front and centre.

It is quite likely that this stage of curriculum development will occur in tandem with the writing of objectives and outcomes rather than afterwards. The process is not meant to be a series of unrelated steps but rather a process of introspection, proposals, and feedback that involves as many members of the community as possible.

Course Objectives / Course Content -> Class Objectives -> Activities Resources, etc

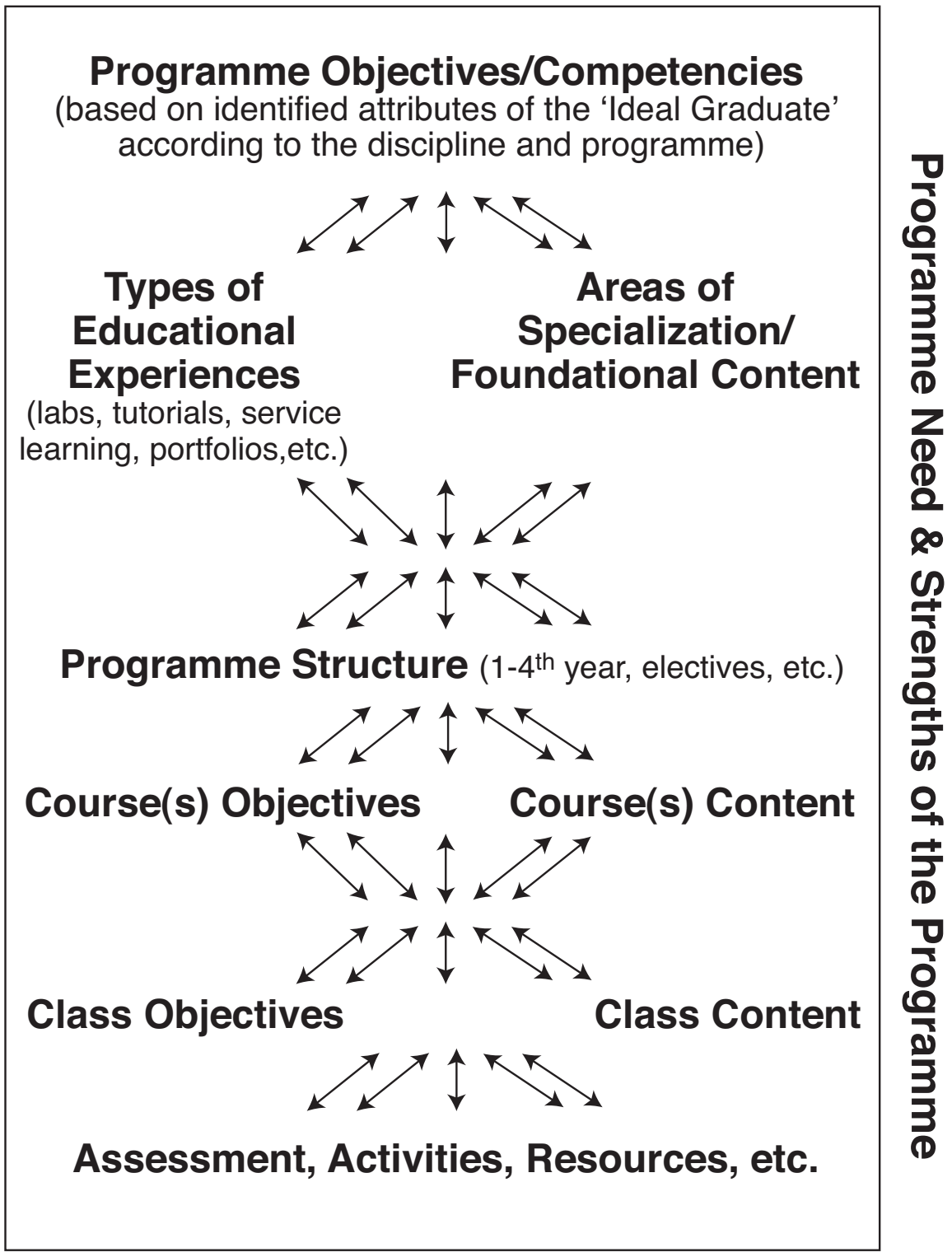
These are the traditional activities connected with individual course design. Whether intuitively or intentionally, as instructors we determine what content, processes, learning experiences, resources, and student assessment strategies work best to meet our teaching and learning objectives. At this point it is worth considering what constitutes a course. Does a course have to always assume a 12-week, 3 contact hours per week experience? We have found it valuable to consider the learning objectives and then determine the content and structure needed. As well we have found that by re-considering contact hours as the amount of time that students are engaged in learning (as opposed to contact meaning time spent with faculty), learning can be more holistically designed and implemented.

Typically, course-level decisions are influenced by concerns with:

- Effectiveness
- Efficiency
- Appropriateness
- Adequacy

In the context of our Curriculum Development process, we encourage instructors to add the overall layer into the mix and be fully intentional about what the learners will be learning not only in the courses for which individuals have responsibility, but also in the programme as a whole. Course instructors have found that relying on some of the research by Anderson, L., Krathwohl, D. & Bloom, B. (2001) to taxonomize learning domains has been invaluable, especially when coupled with a programme worksheet that charts the 'Introduce, Reinforce, and Master' process. A proposed example from our Veterinary College is reproduced as an appendix in this handbook, "Connection to the Curriculum Assessment Process"

***Figure 1: Curriculum Development Process. Peter Wolf, 2005**



Kirkpatrick's Four Levels of Evaluation

It is one thing to suggest that curriculum assessment should ideally take place in all stages of the Curriculum Development, but it is another thing entirely to know how and when to do it. One model in particular has proved its worth time and again: Donald Kirkpatrick's Four Levels of Evaluation (1998). Though originally conceived for training environments, is clear and concise framework to understand the 'how' and the 'when' of curriculum assessment. Please note that for our purposes, there will be no differentiation between 'assessment' and 'evaluation'.

According to Kirkpatrick, evaluation should always begin with Level 1, and then, as time and budget allows, should move sequentially through Levels 2, 3, and 4. Information from each prior level serves as a base for evaluation at the next level. Though not all levels are always measured, each successive level represents a more precise measure of the effectiveness of the training program, but at the same time requires a more rigorous and time-consuming analysis. See Figure 2 (page 9) for a visual synopsis. The following details Kirkpatrick's Four Levels of Evaluation:

Level 1 - Reaction

How do students react to a learning experience? Did they like it? In the immediate sense, did they perceive it to be of value? According to Kirkpatrick, every programme should at least be evaluated at this level to provide data for its improvement. Focus on this level often leads to improved questionnaires, incidentally, because student reaction has important consequences for Kirkpatrick's second level (Learning). As Winfrey (1999) puts it: "Although a positive reaction does not guarantee learning, a negative reaction almost certainly reduces its possibility" (p.1). In the spotlight for decades, the debate about the value of student ratings is really a debate about the Reaction level in Kirkpatrick. No matter where one sits on this one, it is a breath of fresh air to find out that there are THREE MORE levels that we can evaluate!

Level 2 - Learning

Once we know how students feel about their learning experiences, we need to measure what has actually been learned. Level 2 assesses the extent to which students have actually gained anything in the domains we had hoped they would: knowledge, skills, and values. Typically, this is where we might want to use pre- and post-learning tests (formal and informal, team and self) in order to find out to what extent the desired learning has taken place.

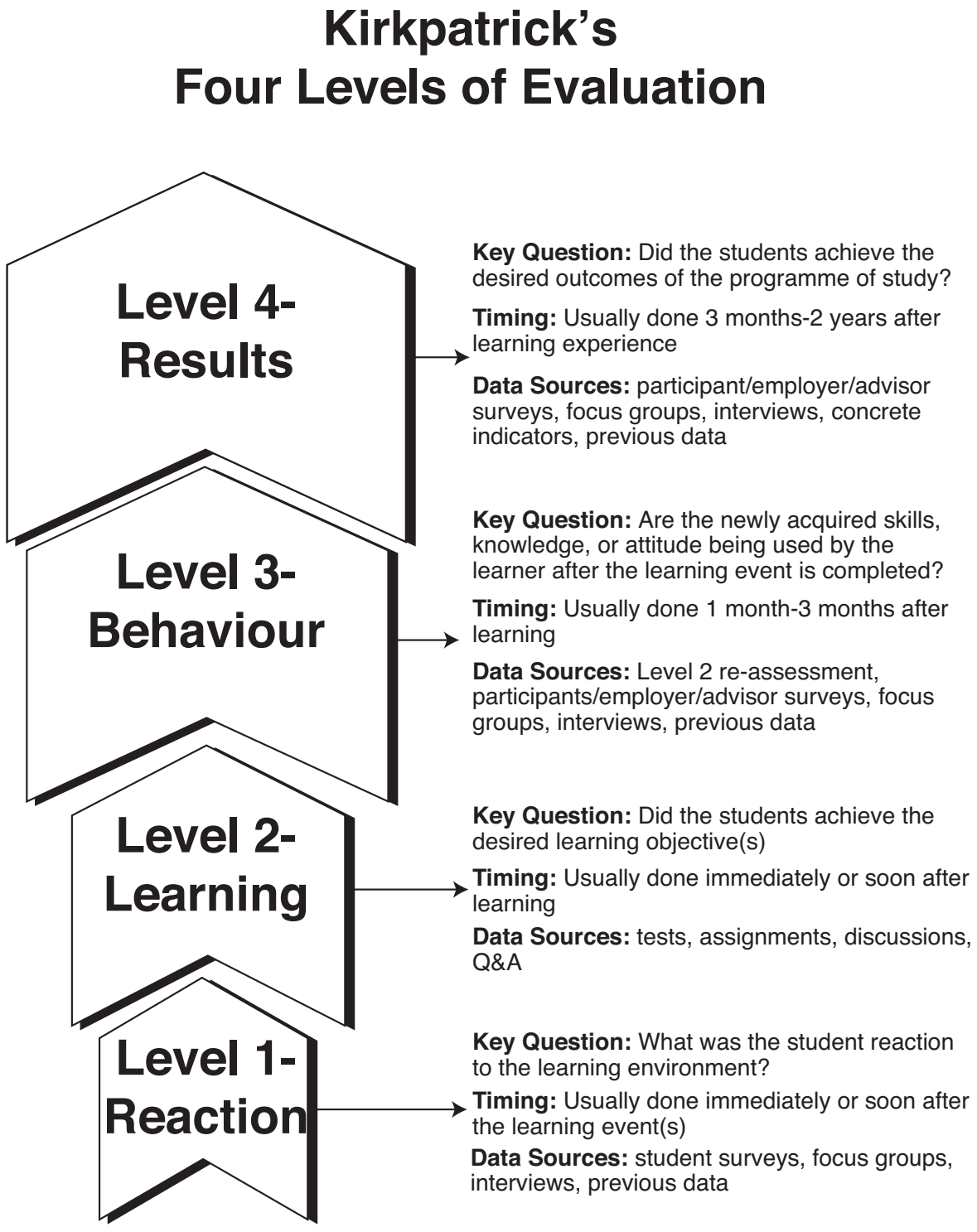
Level 3 - Behaviour

Transfer is the 'golden egg' of evaluation; we are all especially happy when learners transfer learning to practice. This level of evaluation helps us know if we are producing learners who can solidify their learning through transformed behavior. Methods are needed to measure changes that occur in students' behaviours over time, not just immediately after a course, as well as a method sound enough to make explicit the link between the transfer and the course or programme itself. That is to say, we need measures that can support the claim that transfer has occurred as a direct or indirect result of the courses and overall programme of study.

Level 4 - Results

This is the level that excites governments, administrators, Boards of Governors and others interested in accountability and metrics. Even if "bottom-line" thinking is not your cup of tea, it is worth noticing that this level is richest when preceded by careful attention to the first three levels. Although this level is associated by Kirkpatrick with the return on investment and the tallying of measurable long-term impacts to a company, gathering of data from the first three levels correlates with things like graduation rates, job placement rates, and success rates in competitive scholarship or graduate school applications. In an academic setting, determining the desired results of instruction comes directly from the programme mission and vision of the 'ideal graduate'.

Figure 2: Kirkpatrick's Four Levels of Evaluation Applied to Education

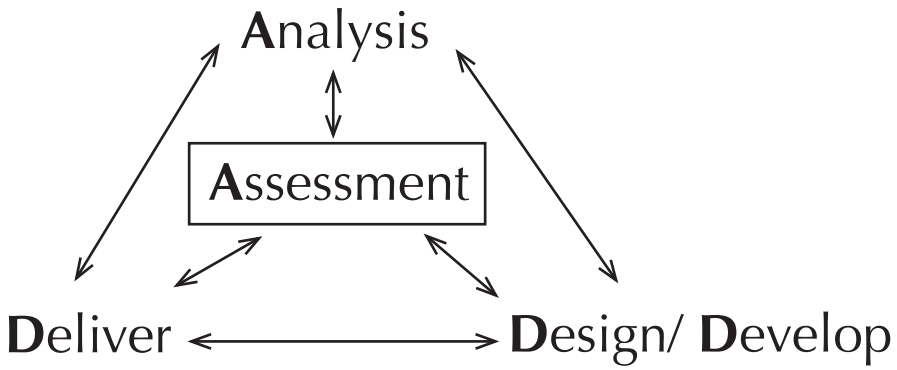


Kirkpatrick, D. (1994). Evaluting Training Programs: The Four Levels, San Francisco: Berrett-Koehler

NOTE: Quite often, EITHER Level 3 OR Level 4 is completed. Not always is it feasible or necessary to assess both levels.For a thorough exploration of the issues involved in assessment of Levels 3 and 4, see Kirkpatrick, D. & Kirkpatrick, J. (2005).

Combining Wolf's Curriculum Development Process and Kirkpatrick's Four Levels of Evaluation

Neither curriculum assessment nor curriculum development stand alone as distinct and separate activities, but are closely linked in the ongoing development of educational programmes that meet the needs of the various stakeholders. When considering curriculum assessment, it is useful to consider the entire process of curriculum evolution. Here is one such model, based on the Instructional System Design model (Clark, 1995):



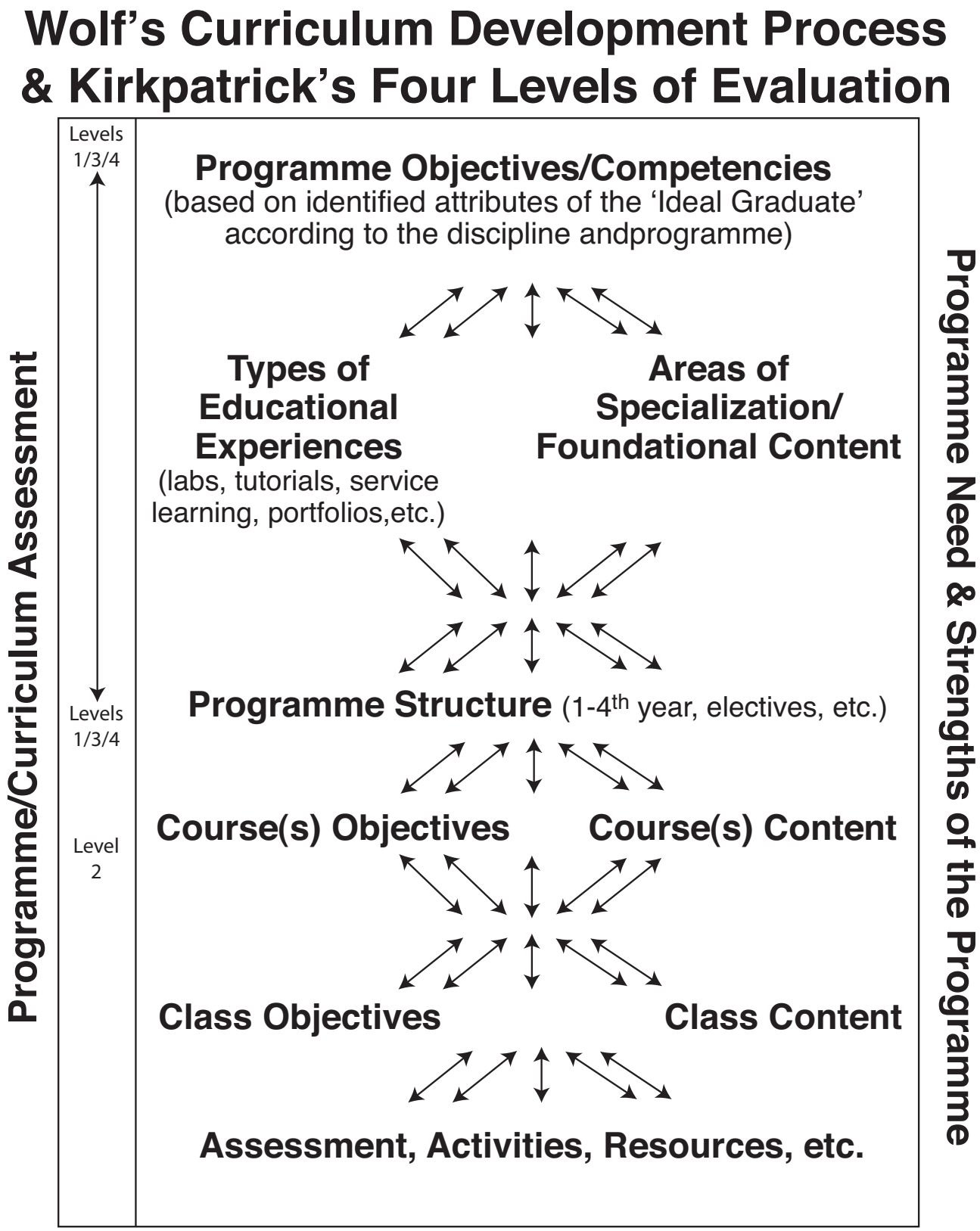
Bringing Wolf's Curriculum Development Process and Kirkpatrick's Four Levels of Evaluation models together informs both the assessment and design/development phases of curriculum evolution. It is ideal to consider all stages of both models when engaged in either process.

For example, when developing programme objectives or competencies, it is valuable to consider how a programme can measure its success. And quite often, the same techniques used for determining the programme objectives can be used to assess the achievement of them. If a programme committee decides to consult potential employers, possible students, and faculty who might teach in the programme, then those might be the same data sources chosen 4-7 years later, when there are graduates in the programme who have since gone on to work. Were focus groups and surveys used as the techniques in developing programme objectives? Those might be the ideal methods for assessing the curriculum down the road. More concrete measures might be attainable as well. Was an improvement in graduate school placement identified as an objective? It might be relatively easy to gather that information and see if that objective has been achieved.

Likewise, for each of the subsequent stages, when determining the areas of specialization and the types of educational experiences which will foster the achievement of the programme objectives, it will be worthwhile to use similar measures to determine whether they fostered the desired transference as determined in those objectives. Often the assessment of these can be done through the same techniques as used above. But perhaps there are other measures as well. If the programme is related to a specific profession, there may be certification exams, or association membership requirements. If not, then perhaps polling graduates as to the knowledge, skills, and values that have proven to be most valuable, and the educational experiences that best enhanced those attributes, might provide insightful information.

Figure 3 (next page) attempts to bring together both models in a visual format. Note that in Figure 3, Kirkpatrick's levels are specified at certain stages of the curriculum development process. And these are where these levels were assessed in this case study. It can be argued, however, that any of the levels can be evaluated at multiple points in the development process.

Figure 3: Uniting the Curriculum Development Process and Kirkpatrick's Four Levels of Evaluation



A Case Study

Professor Art Hill, representing the Food Science Undergraduate Curriculum Committee, approached TSS to find a way to assess his programme's curriculum. The major concerns fo the curriculum committee were:

- developing a continuous programme improvement model for ensuring the programme was meeting the needs of the students and the food science community
- ensuring continued professional association accreditation

From 2005-2006, The Department of Food Sciences (Prof. Art Hill) worked with Teaching Support Services (Peter Wolf) and the Educational Research and Development Unit (Professor Fred Evers) to systematize and conduct curriculum assessment on the Bachelors degree in Food Science.

The programme was already well established and had been through a number of formal reviews. The Curriculum Development model and Kirkpatrick's Four Levels of Evaluation were used as tools in creating strategies and identifying sources of information that would be useful in creating a snapshot of the current state of the Bachelors of Food Science curriculum.

Assessment Data: Which, Who, When, Why, What

The following chart lists the choices made to determine the effectiveness of the Food Science programme. The same methods and information also become the 'inputs' sought on a regular basis for the continued improved of the curriculum over time.

WHICH Evaluation Method	**WHO Participants**	**WHEN Frequency**	**WHY Levels of Evaluation**	**WHAT Questions /Issues Explored**
Exit focus group lunch	Graduating students	Annual	Levels 1/2	• Describe your most enjoyable learning experiences at Guelph. • Comments on other aspects of your Guelph experience: Clubs? Academic Support? • Describe your most important learning experiences at Guelph. • What would you drop/add from the food science curriculum? Why?

Web survey	Recent graduates (2-3 years)	Tri-annual	Levels 3/4	• Describe three of your most significant undergraduate learning experiences. • What three aspects of your undergraduate learning experience are of the most benefit to you in the work place or more generally in life? Explain. • Please suggest changes to help us improve the programme. What would you add/drop from the curriculum? Other changes? • What advice would you give to a first year food science student at Guelph? • Describe one or more ways in which your Food Science education has helped (is helping) your organization fulfill its mission or meet its objectives.
Focus group lunch	Employers	Tri-annual	Levels 3/4	• Describe in what ways the content and objectives of the programme match or do not match your expectations of Food Science graduates? • What do you look for when hiring? • Based on your experience with graduates employed in your company, how well do our graduates meet your expectations? • Describe one or more ways in which the Food Science Programme at Guelph has helped graduates help your organization fulfill its mission or meet its objectives. • What can we do to better prepare our graduates for employment in the food industry? • What advice would you give to a recent or soon-to-be graduate of Food Science?
Review of previous reports	Professional association	Tri-annual	Levels 2/3/4	• Data was used to extract goals and competencies as well as the vision for the ideal graduate.
Half-day retreat	Faculty and graduate students	Annual	Levels 2/3	• Regarding the undergraduate Food Science programme, what are its: - Strengths? - Weaknesses? - Opportunities? - Threats?

Assessment Process

1) Data collection from the student and employer focus groups and graduate survey took place over a period of three months. Previous professional accreditation reports and programme reviews were used to extract goals and competencies as well as the vision for the ideal graduate. Fred Evers, Peter Wolf, and Art Hill met to review and interpret the data. This was organized in the form of a 'Strengths, Weaknesses, Opportunities, Threats' chart.

Strengths	Weaknesses
• Lots of loyalty • Appreciation for/of the program • Cohesive group (most likely from smaller numbers) • Success skills prominent – innovative, interpersonal skills • Sense of community (involvement in extra-curricular activities; Food Science Club) • Food Science content (technical content valued) • Good cross over between success, technical and interpersonal skills • Co-Op aspect is a benefit • People in industry really like the Certificate in Food Science Programme (5 courses)	• Peripheral aspects (politics/culture; international aspects; business aspects; policy/law) • Issues in Food Science (food safety/security) • Writing skills – who is your audience • Communication skills of ESL students • Listening skills
Opportunities	**Threats**
• Help students link to associations (CFST) and clubs • Encourage them to become journal subscribers and read trade magazines (valid source of information) • Help students recognize that they need life balance • Learn time-management skills (Learning Commons should be approached) • General business course / Introduction to Business • Change scientific paper assignment to a topic on Issues in Food Science • Food law and policy issues and understanding • Integrate listening skills (Learning Commons should be approached) • Possibility of international Co-Ops through companies that are international and hire Co-Op students • Portfolios – look at all success skills and technical skills • Apply skills in commodity courses (restricted electives) • Guelph-Humber: Diploma Courses	• Declining budget • Loss of lab time • Need to make better use of student and faculty time

2) A half-day Faculty/Graduate Student Retreat was then held. Participants were provided a comprehensive package prior to the meeting that gave an overview of the process and all of the data that had been collected to date. The majority of the retreat was devoted to eliciting feedback from faculty on the programme. It proceeded as follows:

   • Facilitated by Peter Wolf, three groups were set up with approximately eight people in each group. Four flipcharts were prepared, each designated as Strengths, Weaknesses, Opportunities, or Threats. Each group

had 10 minutes with each flipchart before the flipchart were rotated around the room. Within approximately 45 minutes, all groups had added to each list. Then the four completed flipcharts were displayed and all faculty were encouraged to review the contributions. A discussion followed whereby additions and deletions were made and trends and issues identified.

- The SWOT developed by faculty and grad students was then placed along side the one developed by Art, Fred and Peter after reviewing all the external sources of data. This was reviewed and reflected on by faculty during a 'walk-around break'.
- A discussion was then held looking for commonalities and areas on which to focus curriculum development efforts.

Strengths	Weaknesses
• Industry interact • Access to recognized experts • Teachers are research oriented • Recognized Worldwide • East your experiments • Co-Op • IFT/CIFST accredited • Technical skills • Comprehensive • Good job opportunities • Linked with industries • Senior research • Lab facilities • International relations • Long distance course (DE courses) • Quality of teaching/courses • Practical (lab) experience • Reputation • Success of undergraduates • Interdisciplinary	• Perceived as 2nd class science • IFT: do not assess academic rigour • Program/Curriculum restricted by IFT • Not in control of liaison • Provincial (majority of students are from Ontario) • Thin background in chemistry • Writing skills • No required senior research • Space: no micro lab • Team work • Critical thinking • Not enough promotion/awareness • Research opportunities • Inconsistent marking • Lack of business/industry oriented courses • Leadership skills • Lack of innovation (in courses) • A lot of sessional teaching
Opportunities	Threats
• Food safety and bio-terror • Volunteer/Outreach community • Excess employment • More alumni involvement in program • Interaction with government agencies • Interest in Nutraceuticals • Develop literacy • Food law course • Web-based courses (increase/enhance) • Exchange programs • Out of province and foreign students • Interdisciplinary • GFTC	• Small programme = internal threat • Tuition (increasing fees) • Decreasing student numbers • Nutraceuticals • Image of Food Science (additives, etc.) • Funding • Undergraduate students numbers are decreasing (lack of interest in Food Science) • Web based courses (competition with other universities) • Lack of finance/budget

3) An Action Plan was developed at the retreat and forwarded to the Undergraduate Curriculum Committee for prioritization and action:

Public Relations: It seemed clear that the programme was valuable but that there was a need to increase student awareness, focusing on:

- The importance of Food Chemistry
- Building connections with related professional associations

Curriculum Evolution: the curriculum was perceived as solid and meeting student and industry needs. It was identified that the curriculum would benefit from an additional focus on:

- Research
- Communication (oral presentations and writing)
- Incorporating a senior marketing course to provide a more contextual learning experience

Teaching Assistant Training: A TA development programme was identified as a valuable next step. It was suggested that exploration of the role of TAs within the Food Science programme could be facilitated by Teaching Support Services as well as consideration of:

- The existing course for International TAs
- University Teaching: Theory and Practice (a graduate course on university teaching)

Summary

The case study demonstrates how a clear picture of the curriculum can be drawn from a variety of perspectives in sustainable ways. The process can then be repeated over time, using the same sources, methods, and questions. In this way an evolving curriculum supports an ethos of continuous quality improvement on the journey to well-educated, successful graduates. Combining Kirkpatrick's Four Levels of Evaluation with the Curriculum Development model has resulted in intentional and sustainable choices in numerous departments at the University of Guelph.

For further information or support,
please contact Teaching Support Services at ext. 52973.

Appendix 1: Curriculum Assessment Plan: Bachelors of Arts & Sciences

(Winter semester-2006)

Background

The Bachelor of Arts and Science at the University of Guelph is a unique program designed to integrate knowledges and perspectives across the sciences, social sciences, humanities, and arts. To that end, the degree requires students to complete a minor from the BA program, a minor from the BSc program, and a core of Arts/Sciences courses specifically designed for the BAS degree. By bringing an interdisciplinary lens to teaching and research, the BAS programme provides a model of learning that fosters broadly-based intellectual curiosity and creative problem-solving among faculty and students alike. The BAS produces graduates dedicated to good citizenship and community service. Their unique education will fully equip them to address the needs of an increasingly complex society.

The Bachelor of Arts and Science program was approved by Senate in 2002. The original enrolment target of 60 students per year was almost immediately increased to 100 per year. The program is now at full capacity and has graduated its first class of 12 students.

The Curriculum Assessment Plan

Step 1: Data Collection

Participants	Activity	Questions
Students 1st year & Graduating	Separate focus groups run by external facilitator (provide a list of the programme objectives at the beginning of the meetings)	Potential Questions: • Why did you choose the Bachelors of Arts and Sciences programme (rather than a BA or BSC)? What is different? • What do you hope to develop in yourself or to be able to do upon completion of the programme? • What courses have you most benefited from? Least? Why? • What type of learning experiences (service learning, labs, seminars, etc.) have you most benefited from? Least? Why? • What changes would you suggest, if any? • Please comment on your sense of being in a community of learners

Alumni (12 graduates to-date - 1 year out)	Email survey	• Describe three of your most significant BAS learning experiences. • What three aspects of your BAS learning experience are of the most benefit to you in the work place or more generally in life? Explain? • Please suggest changes to help us improve the program: what would you add/drop from the curriculum? Other changes? • What are you doing now (school/study)? • How has your undergraduate experience helped you get to where you are now and be successful?
Secondary Documents	Programme Proposal Web poll of students (2004)	'Ideal' Graduate vision for the BAS Programme Insights from students across the years of the programme

Step 2: Interpretation of data into SWOT (Strengths, Weaknesses, Opportunities, Threats) chart and presentation to faculty and programme committee

Step 3: Assessment Data & Curriculum Strategic Plan Presentation

Faculty/ Programme Committee	Retreat	• Review description of the "ideal BAS graduate" in terms of knowledge, skills, values that they are to possess, as well as the learning experiences they should have throughout the program. • Regarding the BAS programme, what are its (a) strengths (b) weaknesses (c) opportunities (d) threats? • Review and compare to the SWOT based on students (1st year, graduating, alumni) • Develop recommendations to for curriculum evolution to go to the Programme Committee and all associated Deans

Step 4: Presentation of summary data and report to University Deans for follow-up and discussion

Appendix 2: Curriculum Assessment Plan: Guelph Humber University –Intellectual Skills Development

(Winter semester-2006)

Background

Embedded in each course outline in 6 programmes at Guelph-Humber University are intellectual and success skills. These skills are not content-related but have been identified as key to students' ongoing success. Though not all skills are embedded in each course, the most relevant ones were to be integrated as key to learning, thereby providing appropriate and timely focus.

As the first cohort of Guelph-Humber University are graduating, there is motivation to identify the extent to which students have developed skills in the identified areas, as well as confidence in those skills. There is also the opportunity to review how teaching and learning practices can further reinforce the development of the identified skills.

The Curriculum Assessment Plan

Step 1: Data Collection

Participants	Activity	Questions
Students 1st through 4th year	Questionnaire to be given to one random class across each year of the 6 current programmes (24 classes in total). Focus groups of self-selected students (based on volunteering through the questionnaire)	• See the questionnaire that follows Potential Questions: ⊙ What skills have you most developed in your courses this year? In other aspects of your school life? ⊙ How have you been given opportunities to develop the skills? ⊙ What other opportunities exist to develop these skills? ⊙ What other skills do you think you would benfit from developing? ⊙ How might you develop those other skills?

UNIVERSITY OF GUELPH HUMBER

Program Assessment

Purpose of This Survey
Now that GH has all four years of curriculum in place it is important that our original intentions and quality are maintained. In regards to skill development, this survey is one tool we are using to ascertain if we are reaching our goals.

We are asking that you take a few minutes to complete this questionnaire based on the learning objectives in your courses at GH.

Please circle the following as it applies to you:

Year at GH	Program	Gender
1 2 3 4	BABM MDST JUST DCCT FCSS ECS	M F

Please rank your learning objectives - skill development in the following areas (definitions of each skill follow the questionnaire):

Circle as you feel it applies to you ***1 = low, 5 = high***

Learning Objectives – Skills	Overall in Program	Opportunity to develop in courses this year
1. Personal Organization & Time Management	1 2 3 4 5	1 2 3 4 5
2. Responsibility	1 2 3 4 5	1 2 3 4 5
3. Adaptability & Learning	1 2 3 4 5	1 2 3 4 5
4. Problem-Solving	1 2 3 4 5	1 2 3 4 5
5. Resource Management	1 2 3 4 5	1 2 3 4 5
6. Reading	1 2 3 4 5	1 2 3 4 5
7. Writing	1 2 3 4 5	1 2 3 4 5
8. Speaking	1 2 3 4 5	1 2 3 4 5
9. Listening	1 2 3 4 5	1 2 3 4 5

Learning Objectives – Skills	Overall in Program	Opportunity to develop in courses this year
10. Communicating through Evolving Media	1 2 3 4 5	1 2 3 4 5
11. Mathematical	1 2 3 4 5	1 2 3 4 5
12. Computer Applications	1 2 3 4 5	1 2 3 4 5
13. Teamwork & Interpersonal	1 2 3 4 5	1 2 3 4 5
14. Leadership & Assertiveness	1 2 3 4 5	1 2 3 4 5
15. Conflict Management	1 2 3 4 5	1 2 3 4 5
16. Decision-Making	1 2 3 4 5	1 2 3 4 5
17. Research	1 2 3 4 5	1 2 3 4 5
18. Critical Thinking	1 2 3 4 5	1 2 3 4 5
19. Responsible Risk-Taking	1 2 3 4 5	1 2 3 4 5
20. Creative Thinking & Visioning	1 2 3 4 5	1 2 3 4 5

Please comment on your skill development thus far at GH
How you feel your skills could be enhanced within your program?

Skill Definitions

1. Personal Organization & Time Management involves managing several tasks at once, being able to set priorities and to allocate time efficiently in order to meet deadlines. This skill area involves formulating personal choices and goals based on self-assessment and career research. Self-assessment also entails accurately presenting skills, knowledge, experience and other factors that affect employability

2. Responsibility is the ability to recognize and anticipate the impact of self-confidence, self-direction, and self-management on effectiveness in the workplace. It includes behaving appropriately within prescribed standards and conditions; accepting personal responsibility for actions, decisions, and progress; and evaluating and acting upon constructive feedback

3. Adaptability & Learning is the ability to respond to change and uncertainty (e.g., labour market trends, economic cycles, global competition, emerging technologies, environmental issues, shifting demographics, personal transitions) in a positive and productive manner. This skill involves adapting to new situations and demands by applying and updating knowledge and skills plus the ability to gain knowledge from every-day experiences and to keep up-to-date on new developments. Adaptability also pertains to the ability to develop a plan for work searches that may include researching organizations, establishing employment networks, and identifying community contacts

4. Problem-Solving consists of identifying and defining problems, gathering data related to the problem, generating and prioritizing a set of alternative solutions, and selecting and implementing the best alternative. Problem-Solving involves the ability to ask the right questions, sort out the many facets of a problem, and contribute ideas as well as answers regarding the problem

5. Resource Management is the ability to identify and use resources effectively in order to plan for, and to attain, personal and work-related goals. This involves working within time constraints to meet deadlines, employing appropriate learning strategies, utilizing the expertise of others when appropriate, utilizing budgeting skills that meet day-to-day requirements, and identifying signs of stress and applying strategies to manage stressors

6. Reading is a fundamental skill; a key aspect of literacy, along with Writing and Speaking. Reading effectively involves comprehending and summarizing text by distinguishing between main and subordinate points; analyzing subtleties and nuances of written and graphic texts; and restating accurately what has been read, while maintaining the original meaning and emphasis

7. Writing is the ability to produce clear, concise, correct, and coherent written text to suit the intended audience and purpose. Writing involves organizing the message according to the purpose; selecting only that content necessary to convey the message; employing style, tone, and vocabulary appropriate to the message; and controlling conventions of grammar, spelling, and punctuation. Professional writing requires the effective transfer of written information, either formally (e.g. reports, business correspondence) or informally (e.g. memos, notes)

8. Speaking proficiently means presenting information verbally to others, either one-to-one or in groups. It is the ability to deliver clear, concise, correct, and coherent spoken messages to suit the audience and purpose. Speaking effectively involves using vocabulary, style, and delivery strategies, including non-verbal cues; controlling conventions of standard spoken English, and recognizing appropriate prompts to determine how the message is being received

9. Listening complements speaking. Listening is the ability to interpret and restate accurately, or summarize spoken messages by; following instructions, asking appropriate questions to clarify meaning, controlling internal and external elements that may cause interference, and recognizing and responding to non-verbal cues. This skill involves being attentive when others are speaking, and responding effectively to others' comments during a conversation

10. Communicating through Evolving Media is the ability to research and/or communicate ideas by selecting from available media (e.g., formal letter, memo, e-mail, fax, voice message) the most suitable for the message, audience, and purpose. It also involves manipulating non-linear (i.e., multi-layered) aspects of the media to create messages. The key to communicating is delivering the message clearly and accurately

11. Mathematical generic skills are those with the immediate and important applications that enable us to deal with everyday situations, understand public issues, and solve quantitative problems. At a minimum this will include using arithmetic to perform financial calculations, comprehend arithmetic operations used in news items and documents, and understand the use of ratios, rates, proportions, and percentages. Mathematical skills also include applying geometry through the understanding of two- and three- dimensional space and calculating the areas and volumes of common geometric shapes. Basic algebra to quantify simple problems is also an asset. Basic statistical principles to interpret data, create tables and graphs, and calculate descriptive statistics, such as the mean and standard deviation, are also important

12. Computer Applications skills enable us to use computers comfortably and productively. Computers are evolving tools that can be used for a variety of purposes. Computing is changing rapidly and students need to know how to use the latest applications. Students must be familiar with the role of computers in technology, business, and everyday life plus the use of computerized instructional programs that are used in education and training. An important aspect of this skill is the ability to discriminate among various types of electronic resources for research, analysis, graphics, and process control

13. Teamwork & Interpersonal incorporates the ability to work effectively in groups or teams to achieve desired goals and outcomes by recognizing people's diversity and individual differences. This skill area incorporates accepting responsibility for individual behaviour during group work, planning and making decisions with others and supporting the outcomes, and leading when appropriate. Interpersonal skills involve working well with others (superiors, subordinates and peers), understanding their needs, and being sympathetic with them

14. Leadership & Assertiveness involves the ability to give direction and guidance to others and to delegate work tasks to peers and subordinates in a manner which proves to be effective, and motivates others to do their best. Assertiveness focuses on individual self-expression conducted in a confident, non-threatening manner in order to advance personal or group goals. Included in this area is the ability to evaluate the behaviour of others and to provide constructive feedback

15. Conflict Management is the ability to resolve differing and/or opposing ideas and points of view among people by identifying the different types of conflict, the sources of the conflict, and how the conflict affects interpersonal relationships. It also involves initiating conflict appropriately as well as managing conflict using effective listening, negotiating, collaborating, and problem-solving skills to overcome disharmony
16. Decision-Making involves making timely decisions on the basis of a thorough assessment of the short- and long-term effects of decisions, recognizing the political and ethical implications, and being able to identify those who will be affected by the decisions made
17. Research is the ability to understand and perform research by identifying the nature of the information required; investigating sources of information, including people, texts, databases, and the Internet; organizing the information by employing a variety of techniques such as, spreadsheets, graphs, tables, and charts; and examining the information to select the most relevant, important, and useful
18. Critical Thinking involves identifying the premises, conclusions, and reasoning used to justify claims and evaluating the validity and soundness of arguments, based on qualitative and quantitative information, in order to accept, challenge, or defend claims or findings
19. Responsible Risk-Taking involves taking reasonable job-related risks by recognizing alternative or different ways of meeting objectives, while at the same time recognizing the potential negative outcomes and monitoring the progress toward the set objectives
20. Creative Thinking & Visioning encompasses using idea-generating strategies to create new ideas, concepts, products, and systems and the ability to adapt to situations of change, at times it involves the ability to initiate change, and provide "novel" solutions to problems. Creativity also involves the ability to reconceptualize roles in response to changing demands related to an organization's success. Visioning is the ability to conceptualize the future of an organization and to provide innovative paths for the organization to follow

The skills and definitions in this document are from:

1. Humber College's Generic/ Employability Skills.
2. University of Guelph's *Learning Objectives* (published in each Undergraduate Calendar).
3. *The Bases of Competence: Skills for Lifelong Learning and Employability* by Frederick T. Evers, James C. Rush, and Iris Berdrow. San Francisco: Jossey-Bass, Inc. Publishers (1998).

Step 2: Interpretation of data and presentation to Guelph-Humber Vice-Provost and Programme Heads

Step 3: Presentation of report to faculty for discussion at programme meetings or retreats to facilitate further student development

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