

CCT College Dublin

Institutional Teaching, Learning and Assessment Strategy

July 2015 to July 2020

Version 3 – July 2017 (updated February 2018)

Version 1 (July 2015), Version 2 (July 2016)

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1. Introduction

Teaching, learning and assessment at CCT College Dublin takes place in the national and international context of Higher education. We recognise the importance of a carefully considered teaching, learning and assessment strategy spanning the diverse needs of the institution, its programmes and stakeholders. This is the Teaching, Learning and Assessment Strategy 2015 to 2020 and supports and enhances teaching, learning and assessment across the institution and through all programmes. It reflects the current practices within the environment while recognising the on-going positive developments within the sector and beyond, allowing for continuous audit, enhancement and improvement. While smaller documents and policies have been developed relating to teaching and learning, this is the first major teaching, learning and assessment strategy production for CCT College Dublin.

The strategic philosophy for this strategy considers how our teachers need to prepare students for jobs that have not yet been created, to use technologies that have not yet been invented, and to solve social problems that haven't arisen before. Our teachers have to do more than transmit educational content: they have to cultivate students' ability to be creative, think critically, solve problems and make decisions; they have to help students work better together, by developing their ability to communicate and collaborate; they have to build students' capacity to recognise and exploit the potential of new technologies; and they have to nurture the character qualities that help people to live and work together (Schleicher, 2016). We must also be mindful of the challenges students face when entering, or returning, to Higher Education and ensure we meet with their expectations, and facilitate learning through well thought out pedagogically practices, and ensure that 'equality of opportunity' (Dewey, 1966) is at the heart of what we do.

1.1 Strategy Development Life Cycle

The development of this strategy commenced in 2015 with a view to be fully reviewed in 2020. The strategy is constructed in a way that allows for continual monitoring and improvement through various feedback mechanisms, while also allowing for flexibility to respond to the changing nature of Higher Education and various stakeholder needs.

Our teaching, learning and assessment strategy was informed by academic research relating to a number of themes. These themes were informed by factors that are linked with

successful transition and progression within Higher Education, such as a sense of belonging (Hausmann et al., 2007); social integration with peers (Wilcox et al., 2005); interactions with teaching staff (Cuseo, 2007); and exposure to new people and ideas (Pascarella & Terenzini, 2005). Together with this research, along with the empirical experience of our strategy development team, we have focused the strategy development on the following four themes:

Core Research Themes (to inform Strategy)

1. Establishing a Student Centred Culture of Learning

CCT College Dublin is aware of the support required for students in progressing into, and through, the higher education system, which is supported through a range of initiatives, including the National Plan for Equity of Access to Higher Education 2015-2019, and the National Forum for the Enhancement of Teaching and Learning (Higher Education Authority, 2016). Kuh (2009) makes the point that institutions cannot change who students are when they start college but colleges can identify areas where improvements in teaching and learning will increase the chances that their students attain their educational and personal goals. Specific teaching approaches can encourage confidence development and peer communication, such as Problem Based Learning. Research shows that interactive peer activities have a special role in building students' self-confidence and they can reduce the gap between quicker and slower learners (Fuszard, 2001). We plan to continue to develop programmes that foster a culture of active learning, independent enquiry and critical thinking amongst students from the beginning of their studies. A student-centred approach to programme development will be embedded into all of programme development and re-validation activities, as well as to develop the learner's autonomy in order to pursue lifelong learning.

2. Enhancing Student Engagement and Self-Efficacy

An important factor in student learning and personal development during college is student engagement, or the quality of effort students themselves devote to educationally purposeful activities that contribute directly to desired outcomes (Astin, 1993). Carini et al (2006) state that student engagement is generally considered to be among the better predictors of learning and personal development. Those who believe they are capable of producing desired results through their own actions are more likely to engage in purposeful educational activities, Bandura (1986) describes this process as perceived

self-efficacy. According to Bandura, people with a high sense of self-efficacy approach difficult tasks as challenges to be met, rather than threats to be avoided. They also set challenging goals for themselves, and they maintain a strong commitment to achieving them. When faced with a setback, they quickly recover their confidence and simply redouble their efforts. Bandura states that this type of outlook leads to personal successes while reducing stress and decreasing the risk of depression. In contrast, people with a low sense of self-efficacy avoid difficult tasks, which they view as personal threats. They rarely push themselves to excel, and they have a weak commitment to any goals they decide to pursue. When faced with an obstacle, they dwell on their personal weaknesses and the potential for failure rather than looking for solutions. If a setback occurs, they are quick to give up and slow to recover their confidence afterward. It takes relatively little for such individuals to lose faith in themselves. This is an important consideration in terms of how we approach teaching, learning and assessment, and encourage those with low self-efficacy to participate.

3. Faculty Development and Pedagogical Innovation

We believe in the continued active professional and academic development of faculty members, as evidence shows that education quality improves when teachers are supported (UNESCO, 2014). CCT encourages teacher leadership, which can be defined as teachers focusing on roles beyond the classroom, supporting the professional learning of peers, influencing policy/decision making, and ultimately targeting student learning (Wenner & Campbell, 2017). A study commissioned by Educational International has established a link between teacher self-efficacy and teacher leadership, and sets out proposals for a systemic approach to teacher leadership (Bangs & Frost, 2015). By initiating improvement and innovation at CCT College Dublin, teacher leadership develops teachers' competence and confidence as educators and promotes change, improvement, collaboration and collegiality. This collective collaboration leads to organisational reflection, which Reynolds & Vince (2016) describe as, a socially situated, relational, political and collective process, which further enhances all of our programmatic activity. We also need an improved understanding of how students learn, and the changing technologies used to support and drive learning. Part of this process is faculty continuous professional development, with ongoing engagement with new approaches to teaching and learning.

4. Learning through Collaboration

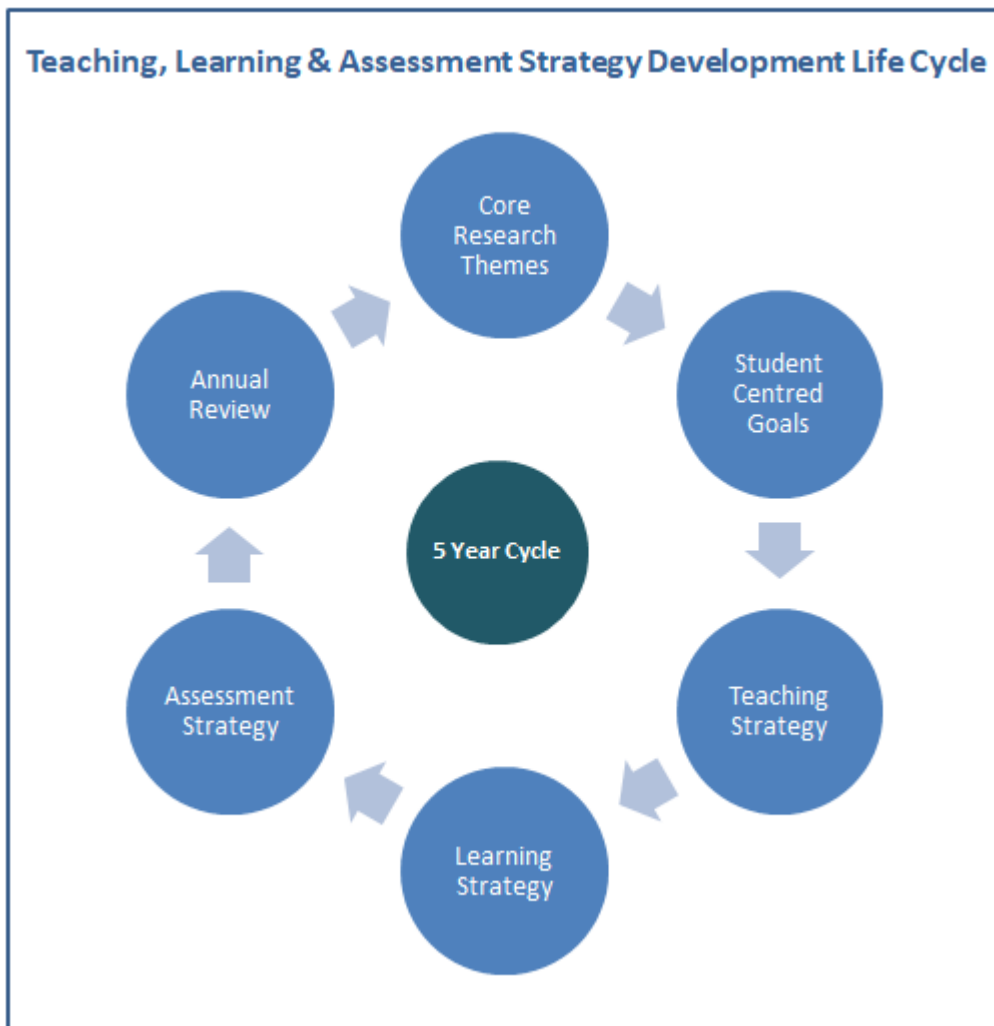
We define learning through collaboration to include collaborating on internal projects involving both students and faculty and administrative staff, as well as projects that reach out to sector where best practice in teaching, learning and assessment can be shared. To achieve this, we propose to continue with collaborative initiatives, which we have designated staff as acting members of:

- Higher Education Colleges Association (HECA) Teaching & Learning Committee
- National Forum for the Enhancement of Teaching & Learning
- International Conference on Engaging Pedagogy (ICEP)

In addition, we intend to continue with our Student Mentoring programme, which is achieved through the collaborative work of both student mentors and academic staff, we also aim to facilitate further student and faculty collaboration through our newly proposed Centre for Teaching and Learning. This type of activity is particularly important for our proposed post-graduate programme offering. Please see Appendix 1: Collaborative Research Projects, for a list of published work and conference presentations in which academic staff engaged with our student cohorts to enhance our student experience to date.

The academic research themes above feed into the student centred goals, which underpin the teaching, learning and assessment strategies within our development framework. Figure 1, on the following page, represents our five year Teaching, Learning & Assessment Strategy development life cycle.

Figure 1: Teaching, Learning & Assessment Strategy Development Life Cycle.



The development framework expressed in Figure 1 is achieved through the various sub strategies for teaching, learning and assessment together with continuous feedback to monitor measure and evaluate on a yearly cycle.

1.2 Student Centred Goals

1. Developing knowledge, skills and competencies.

- Continue to develop programmes that map to the National Framework of Qualifications, with a view to creating a new Level 9 (Masters) programme within the scope of this strategy. The need for a Level 9 programme is supported through the demand from our Level 8 graduates who wish to continue their educational progression.

- The programme learning outcomes are practical and focused on enabling students to develop knowledge, skills and competencies in their discipline.
- Programmes have clear programme assessment strategies.
- Assessment is aligned to learning outcomes. A wide range of assessment methods reflects the variety of learning outcomes.
- Reasonable accommodation is part of our assessment approach.
- Programme boards and programme teams work together. Teaching, learning and assessment strategies are student centred.
- Cross-institute and interdisciplinary activities and study are encouraged and supported.
- Technology enhanced learning is used to facilitate student achievement of learning outcomes.
- Students are encouraged and supported to become independent learners and entrepreneurial in their approach.
- Learning how to learn is a key approach to student learning.

2. Enhancing Student Engagement and Learning Participation

- Class size appropriate to the learning strategy e.g. class size varies to allow for active learning or combined lectures and seminars to explore cross-disciplinary areas.
- Learning focuses on the student experience and the practical application of learning.
- Collaborative learning and team work is part of student learning.
- Feedback on learning is provided as needed. Formative assessment is built into the programme assessment strategy: feedback is a vital part of the student learning experience.
- Assessment is fair, consistent and appropriate to the learning outcomes. It is diverse, challenging and enables the student to become an independent and autonomous learner.
- Ongoing development of the curriculum, teaching & learning, and assessment practices to reflect best practice is supported through staff development.
- Reaching out in new and innovative ways to learners from all backgrounds, identities and abilities.
- Equality and diversity is celebrated through the curriculum, teaching and learning and assessment

- Resources and accommodation for learning are appropriate to both student need and programme requirements and capable of reasonable accommodation.
- Student support for learning is multi-faceted.
- Employability is a focus of student learning and assessment.

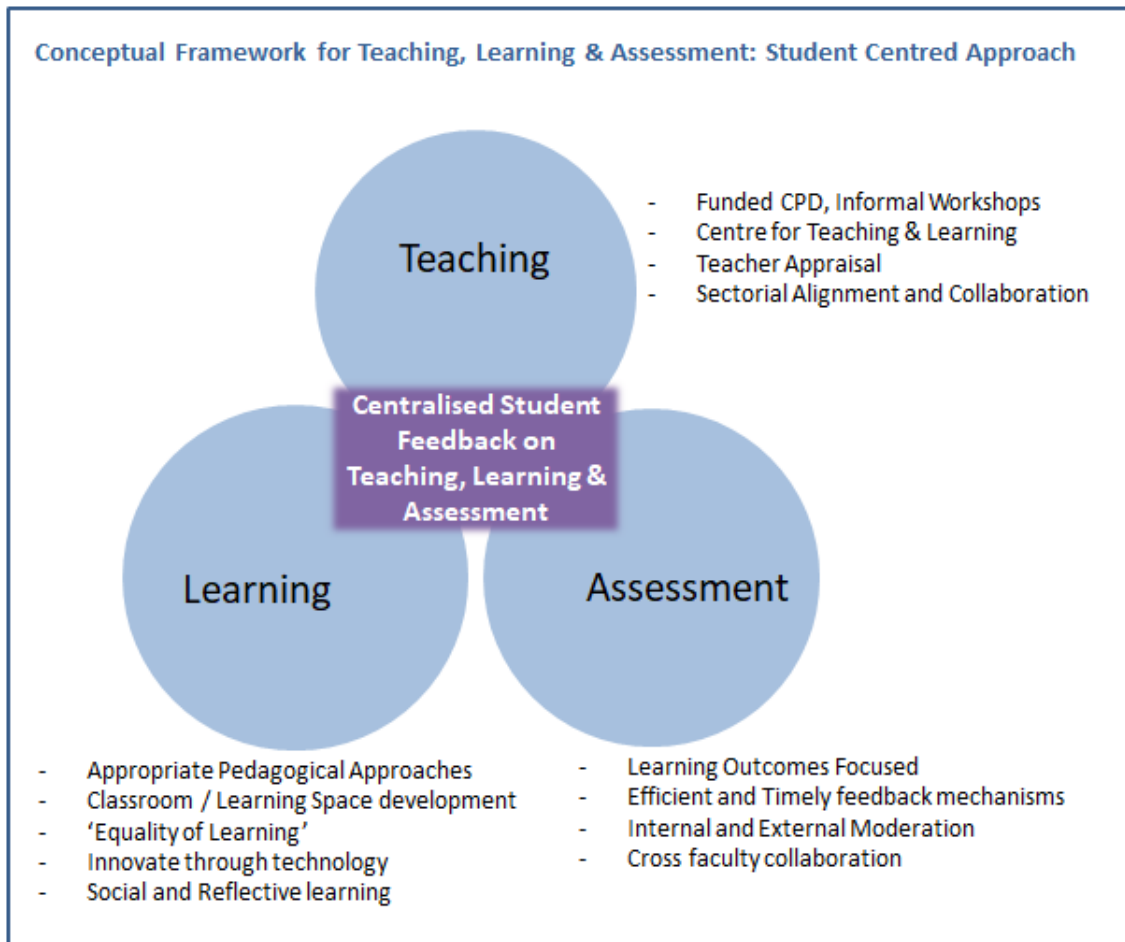
3. Cultivating a Lifelong Learning Culture

- Students are prepared for work through evolving practical teaching, learning and assessment strategies, they are employable on graduation.
- Programmes aim to develop a sense of entrepreneurship and creativity in students.
- Students are enabled to develop the skills of independent learning and a sense of responsibility for their present and future learning
- Students are given the opportunity to experience technology enhanced learning environments which encourage and promote self-study.
- Students are enabled to be active citizens working in the global economy and society.
- Programmes foster life-long learning and a professional attitude to practice.
- Programmes link to industry, society and community and professional bodies.

1.3 Teaching, Learning & Assessment: Student Centred Approach

A core activity within our strategy is to be student focused, we believe an effective way to measure and monitor this activity is through a number of feedback mechanisms. This approach ensures we do not treat feedback as an isolated activity to one element of our strategy, but to centralise it to sure we are taking a holistic approach to being student centred. Student feedback is collated through faculty programme boards, student representative meetings and our end of semester evaluations, incorporating programme, and module and lecturer feedback. An annual review occurs in July of each year which allows for consideration and further development over the summer months and actions to be implemented before the commencement of the next academic cycle. Figure 2 on the following page outlines the conceptual framework for how we facilitate our student centred approach through holistic feedback.

Figure 2: Conceptual Framework for Teaching, Learning & Assessment: Student Centred Approach (CCT College Dublin)



2. Teaching Strategy

Our holistic approach to teaching is learner-centric, with learners progressing and experiencing their respective programmes through a combination of formal lectures, including guest lectures from industry, mentoring and small group tutoring, direct supervision and project supervision and independent learning, all focussing on the achievement of module and programme learning outcomes based on the core knowledge, skill and competency areas. Mentoring and small group tutoring facilitates specific learning whereby group collaboration is required; in this context additional facilitators assist in the delivery of this element of learning. Direct supervision refers to learners who need specific assistance based on their needs at a particular time and stage; this could be to assist a learner who is struggling to grasp content or theory, or to assist a learner in further research beyond what is expected within a module. A supervised project requires the allocation of a learner to a supervisor for specific assistance in the development of a project based assessment.

The main teaching and facilitative strategy is to introduce the knowledge base for each curriculum item, demonstrate the evaluation methods, and provide a framework to guide learners in their independent learning, and learning to learn. Special emphasis throughout all of our programme strategies is to integrate knowledge to other areas via cross modular assessment, applying it to real-world problems and scenarios, and doing so with varying degrees of autonomy. Teaching is supported by directed study of textbooks, academic papers, conference proceedings, articles and other resource material in addition to hands-on activity and project work. Learners are encouraged to participate actively in their learning by undertaking preparatory work before each lecture, involving the reading of recommended texts, programme related research, case study or other sources. This enriches the in-class discussion which forms part of each lecture, and helps to ensure that programme learning outcomes are achieved.

Novel teaching as well as assessment techniques will be utilised, such as game based learning, flipped classroom model, screen casting, oral reporting and e-portfolio creation. In addition, we encourage our faculty to engage in Enquiry and Problem Based Learning, Group/Self/Peer evaluation and Self-Reflection methods into our programmes with a view to providing our learners with the best possible learning opportunities. All group work is subject to QA Policy-CCTP502-Group Project (<https://www.cct.ie/about/qa/>) to ensure fairness and consistency.

2.1 Continuous Professional Development

Continuous Professional Development is achieved through the following initiatives, approaches and informal support:

- Informal staff development workshops for quality teaching and learning, this includes workshops we host with internal teaching and learning professionals, as well as inviting experts from the sector to host sessions on teaching, learning and assessment.
- Encouraging faculty members to undertake academic professional programmes for teaching and learning, and other relevant areas relating to our core programmes.
- We encourage our faculty to engage in latest reports, research and articles, attending conferences, presenting papers, researching the discipline/practice and teaching and learning.
- We encourage our faculty to engage in academic research and will further support this through our proposed Centre for Teaching and Learning.
- Space for learning – a range of teaching and learning spaces to support student learning both individually and in groups.
- Library and ICT resources to enable access to learning materials and the means to develop and share ideas.
- Programme teams and boards through the development of the programmes and coordination of the teaching, learning and assessment.
- Award faculty who actively engage and share in the practice of teaching in Higher Education. This is achieved through bodies such as the National Forum for the Enhancement of Teaching and Learning, as well as our own internal award and recognition approach.

Please see **Appendix 2: Staff Awards and Academic Development**, for samples of recent achievement, together with those who have, or who are, engaged in continuous professional development.

2.2 Sectorial Engagement through Research and Collaboration

Sectorial engagement through research and collaboration is achieved through a number of initiatives that our staff are engaged with. We propose to continue engaging with these collaborative initiatives, which we have designated staff as acting members of:

- Higher Education Colleges Association (HECA) Teaching & Learning Committee
- National Forum for the Enhancement of Teaching & Learning
- International Conference on Engaging Pedagogy (ICEP)

2.3 Programme Development and Pedagogy

Programme development and pedagogy go hand in hand, and as such, require careful consideration as these programmes are the basis of learning and development for our prospective students. As our programmes are predominately QQI accredited, consideration is needed to ensure a programme is coherent and robust to ensure its successful implementation and lifespan.

Curriculum development at CCT College Dublin is based on the following principles:

1. Programme development is research-informed and research-based. It is based on collaboration, relevant industry feedback and review of practice.
2. Programme learning outcomes are matched with appropriate learning and teaching strategies and assessed appropriately.
3. Learning outcomes (at programme level) are related to the appropriate level on the National Framework of Qualifications and meet the required award standards.
4. Programmes meet the demands of students, industry and society.
5. Programmes may anticipate future demands of students, industry and society.
6. Programmes are supported by discipline/practice expertise in staff and supporting organisations.
7. Programmes have elements of practice e.g. work-based learning, real-world simulation.
8. Programmes provide a level of choice for students in relation to learning and assessment. This could be through electives in the programme or through negotiated assessment, particularly projects.
9. Social learning and engaging assessment techniques are considered for all programmes.
10. Best practice pedagogy is embedded into all sub Teaching and Learning strategies within our programmes.

2.4 Centre for Teaching & Learning

One of our strategic goals is to establish a Centre for Teaching and Learning at CCT College Dublin which will promote the development of faculty staff, further facilitate the mutually beneficial integration of faculties and library of CCT, and share and receive best practice in teaching, learning, and assessment across the sector to enhance the learner experience. This goal is also incorporated in our Institutional Strategic Plan 2018 to 2020. The Centre for Teaching and Learning will not only facilitate faculty development, it will provide a supportive base for post-graduate students in their research based activities and endeavours.

While we have engaged in research projects to enhance the overall student experience, we need to encourage and engage the business faculty to ensure both faculties are afforded the same opportunities to conduct academic research. One particular goal is to conduct cross discipline research to encourage cross faculty communication and collaboration. Please see **Appendix 1: Collaborative Research Projects**, for samples of research published by CCT College Dublin staff members.

2.5 Monitoring

The teaching strategy will be monitored through the use of learner feedback reports, staff meetings, programme boards and following the reports from the External Examiners.

Our Teaching practice is reviewed in various ways including:

1. Individual confidential student feedback through our end of semester student survey.
2. Evaluations of teaching strategies are reviewed at programme boards, which take place three times at semester.
3. The annual review of Teaching, Learning and Assessment will incorporate teaching practice within our various programmes.
4. Teaching, Learning and Assessment strategy review on a regular five year cycle. This extensive review incorporates a detailed examination on our practice, down to programmatic level.
5. External examiner reports – focusing on assessment creation and grading.
6. On-going research our faculty are engaged with, including research on new pedagogical approaches and their effectiveness within the classroom.

3. Learning Strategy

At the heart of our Learning Strategy is student engagement, whereby engagement can be described as students who are involved in educationally productive activities. Engaged students develop habits of the mind and heart that enlarge their capacity for continuous learning and personal development (Shulman, 2002). Faculty members also play a key role in student engagement as they make concrete links between what students are reading and discussing and engage with other aspects of their lives, such as their job setting and family or peer relations, and design assignments and examinations that require students to demonstrate how to use what they are learning in other settings (Kuh et. al., 1994). Also important to student learning are institutional environments that are perceived by students as inclusive and affirming and where expectations for performance are clearly communicated and set at reasonably high levels (Kuh, 2001; Pascarella, 2001). In addition to the role of the environment plays in engaging students, peers substantially influence how students spend their time and the meaning they make of their experiences including their personal satisfaction with college (Astin, 1993; Pascarella and Terenzini, 1991).

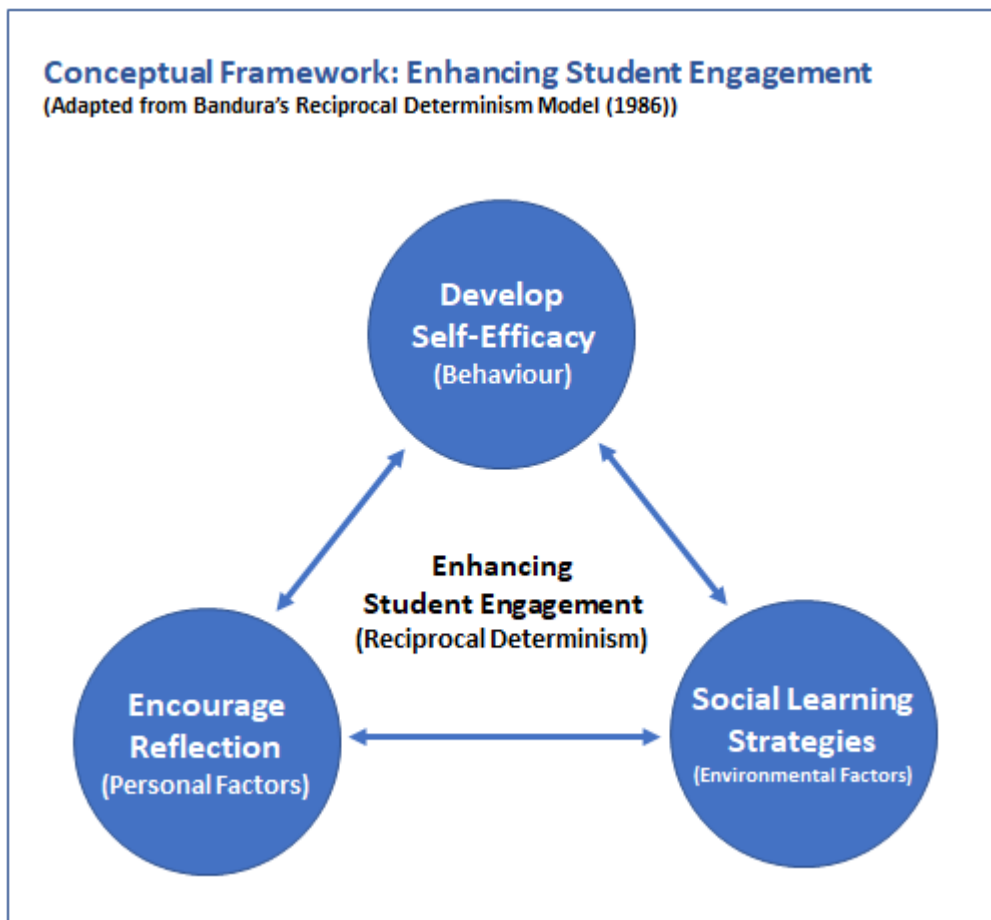
Reflection is also another important process for both teacher and learner. Paulo Freire's (1972) concept of critical consciousness is based on the richest learning begins with action, which is then shaped by reflection, in which this reflective process gives rise to further action. Students through reflection are encouraged to look back on what they have already done (Jordan et al., 2008), in this way, associations can be made between new material arriving bottom-up from the environment and top-down material already stored in memory. Teachers are a key component in the reflective learning process and ideally teachers should design material that stimulates learners' cognitive processes and encourage learners to make mental connections for themselves. Reflection encourages teachers to see the problem through the learners' eyes, which is helpful in designing appropriate learning experiences (Jordan et al, 2008).

To engage students and to encourage reflection, we need to consider the development and enhancement of self-efficacy. Bandura (1986) has outlined three ways in which a strong sense of self-efficacy can be developed. The first and most effective way is through mastery experiences. Simply put, past success strengthen the belief that future success is possible, while past failures undermine it. After students become convinced they have what it takes to succeed, they are more likely to stick with their goals, even when problems arise.

A second way to build strong self-efficacy beliefs is through vicarious experience; in other words, by watching other people perform the behaviour. The impact of modelling on perceived self-efficacy depends largely on how much the observer sees him/her as being like the model. The more similar the model and observer, the greater the effect. When people watch someone similar to themselves accomplish a task through sustained effort, they are more likely to believe that they can do it, too.

A third way to install self-efficacy beliefs is by social persuasion; that is, by telling people that they can be successful. People who are persuaded by others that they have what it takes to succeed are likely to try harder and to be more persistent than those who hold self-doubts. We believe the implementation, and further development, of our Student Mentoring Programme will facilitate the development of self-efficacy. Figure 3 below represents our conceptual framework for enhancing student engagement through the encouragement of reflecting on learning, social learning and the development of self-efficacy.

Figure 3: Conceptual Framework: Enhancing Student Engagement



3.1 Learning Environment

CCT College Dublin strives to create an environment that embraces student-centred pedagogical research and the implementation of novel teaching and learning assessment practices. An education system is only as good as its teachers and unlocking their potential is essential to enhancing the quality of learning.

Our environment is equipped with all the expected Higher Education learner amenities. However, the College campus retains a small-college ‘family’ feel in many aspects – for instance our ‘open-door’ policy within both faculties, where lecturers do not have scheduled office hours, but are on campus full-time a minimum of four days per week, and students are welcome to speak to lecturers outside of class at their leisure. Of course, for students who prefer to schedule an office appointment with a lecturer, this is facilitated. We propose to continue with this approach despite our projected growth.

One particular strategic goal during this strategic cycle is to introduce in-class computer based touch screen technology to eliminate static white-boards. Within a classroom, viewing the white board can be challenging, depending on the location of the student. To overcome this problem, we plan to implement touch screen devices in all of our lecture rooms whereby anything that is digitally written onto the screen is displayed onto the digital screens positioned around various parts of the room to ensure all learners can see content without issue.

Learning Support & Associated Services

All students are provided with a thorough orientation during their first week where they meet members of staff and are introduced to the physical, social and intellectual facilities. Many students are based on campus for the entire working day regardless of their class schedule.

We will continue to strive to make learning resources available to those who cannot be on campus outside scheduled class time. All learning materials are stored on the college VLE system and most module activity that relates to learning and assessment is available through our VLE. Our VLE is a core service that we believe is an active ingredient to the learning experience; we believe it serves four functions:

- 1 Moodle acts as the main organisational repository for each module allowing students to get a snapshot of the state of each module within a programme along with any supplementary materials required;
2. It allows students who cannot work on campus except for scheduled class times to interact with their lecturers, learning materials, and fellow students;
3. It serves as the central conduit through which all assessment items, learning materials, class activities are channelled. For instance, this allows students to view learning materials and submit assessment items 24 hours per day, regardless of where they are located however it is assumed they have internet access;
4. The VLE serves as the main communication mechanism for any announcements, deadlines, changes, etc. For instance, students can ask questions of the lecturer or other students when they come to mind, instead of waiting for the next in-person meeting.

The intellectual environment of the classroom is further supported through the provision of additional services including the library, private small study rooms, academic support and study skills support.

Pastoral Care Service

The general wellbeing of learners is also an important consideration for CCT College Dublin. For many, returning to Higher Education can be a daunting experience, or balancing the challenges of study, family and employment can become overwhelming if the right supports are not in place. Students who are facing specific difficulties outside of their studies will be offered access to specialist advice and counselling through our Head of Student Services. The Head of Student Services is available to students either by appointment or on a drop-in basis.

Guidance and Careers Support Service

CCT College provide a dedicated Careers Support and Company Placement Service, provided by our Careers Advisor. The main functions of the Careers Support Service are:

1. To develop and promote the Careers Service both within and outside the college and to consult with members of staff concerning students, their employment and career development,
2. To undertake fully a practitioner role in all aspects of careers advisory work and to contribute to individual careers counselling and guidance.

3. To ensure the efficient management of the careers services and the monitoring of performance in relation to service provision; To liaise with relevant employers and recruitment consultants outside the college in monitoring full-time and part-time job and career opportunities within the IT/Computing and Business industries.

Facilities for Learners with Additional Needs

With regard to any additional needs for assessment for those learners with a specified learning need, CCT College maintains the policy (outlined in Policy CCTP506 entitled 'Reasonable Accommodation', of the CCT College QA system), to examine each case on an individual basis, and will seek to provide reasonable accommodation within the assessment regulations of CCT College and assessment guidelines of QQI to meet the needs and requirements of any learner requiring special consideration.

As a small institution fostering a dynamic, responsive and supportive learning environment, learners are actively encouraged to report any special needs at time of admission stage, or to their lecturer, programme leader, Faculty Head, or QA Officer, for any requests for reasonable accommodation. The building has been awarded the Disabled Access Certificate (DAC), to comply with latest Building Regulations, issued by the Building Control Authority.

General Student services

CCT College Dublin provides other essential student services, namely, support for Social and Sports programmes, Medical Insurance provision, Subsidised health service, Subsidised Counselling service and provision of cultural learning and activities. One of our goals is to engage with our students to investigate if there is an appetite to set up a Student Union, to date, this was not endorsed by our student groups – perhaps because of the existing class representative and Year Head system will have in place.

3.3 Student mentoring and peer-support programme

CCT College Dublin recognises the support students require throughout their programme of study, particularly with regard to learning. Although both faculties provide learning support through supportive lectures, there is a need for students to form their own identity with a programme and to form study groups that facilitate learning. Although these study groups are created informally, we believe we can assist in the creation of a structured student

mentoring and peer-support programme. Many early programme stage learners report a lack of what Crenshaw (2008) calls community identity, and programmes are sometimes lacking in socialisation aspects which can foster the development of such identities. Biggers et al (2008) have highlighted “low levels of human interaction”, exemplified by a lack of peer-to-peer interaction, peer mentoring and learning. Dewy (1963) believed in the interaction between the learner and the teacher and encouraging learners to share their thoughts which in turn allows the teacher to get to know the learners better, thus benefiting the overall learning experience of the class. Vygotsky believed that knowledge and thought are constructed through social interaction with family, friends, teachers and peers. He referred to the people that we learn from as Most Knowledgeable Others (MKO’s) and the process of learning through social interaction as being in the Zone of Proximal Development (ZPD) (Vygotsky, L.S., 1962; Vygotsky, L.S, 1978). He suggested that when learners were in the ZPD, they developed an understanding of a subject that may have been beyond their previous level of comprehension. He also developed the concept of scaffolding to describe the teacher’s role in engaging with people and supporting their development while they were in the ZPD. There are many teaching strategies to encourage social interaction, such as enquiry and problem-based learning, and O’Neill and More (2008) state this can be implemented in large and small groups, and with students acting as participants, mentors and tutors. With the successful implementation of a student mentoring and peer learning pilot programme from January to June 2015, we now move to implement a formalised student learning support programme for the duration of this strategic cycle.

3.4 Collaborative Projects

Students are expected to conduct independent study, which is embedded within all of our programmes. However, we also believe in the importance of collaboration between students, and between students and faculty members. This reciprocal process is a core principle of our strategy. Part of our strategic goals is to continue creating collaborative projects and the proposed Centre for Teaching and Learning is one such example. The Centre for Teaching and Learning will allow students to collaborate over research projects, spanning stages and disciplines. We also envisage collaborative research projects between students and faculty members and allow for this important work to be showcased in a seminar that we host, with invitation to the wide sector.

3.5 Guest Lectures

There are various areas within our programmes that have a close relationship to industry due to the practical nature of some modules. In some cases, industry informs the module development. Although we host academic programmes, there are times where industry experts can add real value to the learning experience through their discussion of topics that are covered by our lectures, and how they are applied from an industry perspective. We have hosted guest lectures in the past, in an informal capacity, but we now move to formalising this process and creating a schedule of industry guest speakers that our students can attend. In addition to industry expert guest speakers, we also believe areas such as study support, career guidance and personal and professional development can be embedded into this programme, particular for those students are at a later stage within their programme of study.

3.6 Monitoring

Learning is monitored through a number of feedback mechanisms. Some of the feedback systems include:

1. Individual confidential student feedback through our end of semester student survey.
2. Evaluations of learning strategies are reviewed at programme boards, which take place three times at semester.
3. The annual review of Teaching, Learning and Assessment will incorporate learning approaches within our various programmes.
4. Teaching, Learning and Assessment strategy review on a regular five year cycle. This extensive review incorporates a detailed examination on our practice, down to programmatic level.
5. External examiner reports – focusing on assessment and grading.
6. On-going research our faculty are engaged with, including research on new pedagogical approaches and their effectiveness within the classroom.

4. Assessment Strategy

We believe assessment should be valid reliable, fair, transparent and authentic. In the context of Learning Outcomes, assessment tasks (and marking criteria) should enable students to demonstrate their achievement of these outcomes and facilitate robust decisions. Within each programme, therefore, a range of assessment instruments should be used without over-reliance on a single approach. Further, programmes need to avoid over-assessment of students and maximise the opportunity for students to learn from previous assessments (as is agreed to be one of the educational purposes of assessment).

Research shows that formative assessment is educationally powerful. Programme Boards will work to ensure that each programme provides students with sufficient opportunity for such formative feedback. Each programme will measure the degree to which students do engage with such support when it is available. Integrative assessment strategies can be developed which attempt to tackle this issue within the context of a range of academic disciplines and modular programmes.

The learning outcomes of our programmes will be achieved with a variety of approaches and the application of a range of teaching methods, learning styles and formative and summative assessment strategies. Examples of how we will continue to achieve this are as follows:

- Our programmes will be learner focused. It will integrate skills and knowledge through an active pedagogical approach (faculty attend mandatory Teaching, Learning and Assessment workshops);
- Our programmes will foster social constructivism, through group projects, group presentations, peer review and peer assessment (All group work is subject to QA Policy-CCTP502-Group Project (<https://www.cct.ie/about/qa/>) to ensure fairness and consistency), Project supervision is guided by QA Policy-CCTP507Project Supervision (<https://www.cct.ie/about/qa/>);
- Our programmes will support reflecting-on-learning through reflective learning practices such as reflective learning journals, blogs and diaries;
- Lectures will be designed to provide the learner with basic knowledge of individual modules, encouraging learners to engage in self-study for further knowledge;

- Teaching and tutorial sessions will provide the learner with the opportunity to apply the theory and concepts to practical examples and cases;
- Assignments, projects, reports and real-world case studies will provide the learner with the opportunity to link the concepts and theory to practical examples;
- Presentations will facilitate the development of learner confidence and self-efficacy and professional articulation through the use of effective communication techniques.
- Individual project work will significantly add to the learner's sense of achievement and ability to carry out work and research autonomously.
- Assessments will be aligned to the learning outcomes of individual modules and timely feedback will be provided to learners on performance.
- Continuous assessments will be completed by learners using appropriate information and communications technology and will be submitted via our VLE.

4.1 Coordinated Assessment Planning

Assessment planning is very important within our faculties and without interactive management, students can be on the receiving end of a number of due dates at the same time, thus creating an unnecessary burden and impacting on the learning process. We have introduced Coordinated Assessment Planning which requires all faculty members to put forward the assessment type, the module learning outcomes addressed and submission date for each piece of assessment within their respective module. This is then centralised into a schedule that is managed by our faculty coordinators. Weekly, or bi-weekly, meetings are held in each faculty department to conduct a check-in on assessment, this ensures that assessment was issued as planned, and that feedback was given in a timely manner. Where assessment was not given on a due date, this is then flagged and a follow up conducted with the lecturer. This system reduces faculty members working in isolation from the rest of the modules within a programme, and puts the student at the centre of assessment to ensure fairness and consistency across a programme. Coordinated Assessment Planning is also useful in the planning of cross modular assessment, whereby faculty members can see assessment types issued by other lecturers which can be the basis for the discussion on creating cross modular assessment which may have not be considered previously. This is also managed and monitored by our faculty coordinators.

Within this strategic cycle we now move to utilise technology to assist with the monitoring of assessment to allow our faculty coordinators to view assessment in real-time, in terms of

assessment dates, when feedback is due, and to flag when assessment dates have changed create over-lapping due dates for learners.

4.2 Monitoring

Assessment is monitored through a number of feedback mechanisms. Some of the feedback systems include:

1. Our Coordinated Assessment Planning monitors assessment and feedback throughout the semester which is managed by our faculty coordinators.
2. Individual confidential student feedback through our end of semester student survey.
3. Evaluations of assessment strategies are reviewed at programme boards, which take place three times at semester.
4. The annual review of Teaching, Learning and Assessment will incorporate assessment methods within our various programmes.
5. Teaching, Learning and Assessment strategy review on a regular five year cycle. This extensive review incorporates a detailed examination on our practice, down to programmatic level.
6. External examiner reports – focusing on assessment and grading.
7. On-going research our faculty are engaged with, including research on new assessment techniques and their relationship with learning.

5. References

- Astin, A. W. (1993). *What Matters in College? Four Critical Years Revisited*. Jossey-Bass: San Francisco.
- Bandura, A. (1986). *Social Foundations of Thought and Action: Social Cognitive Theory*. U.S.A: Pearson Education.
- Bangs, J. and Frost, D. (2015). *Non-positional Teacher Leadership: Distributed leadership and self-efficacy*. In R. Kneyber and J. Evers (Eds.) *Flip the System: Changing Education from the Ground Up*, London: Routledge.
- Biggers, M., Brauer, A., and Yilmaz, T., (2008). *Student perceptions of computer science: a retention study comparing graduating seniors with cs leavers*. SIGCSE Bull., 40:1, 402-406.
- Carini, M. R., Kuh, G.D., Klein, S. P. (2006). *Student Engagement and Student Learning: Testing the Linkages*. Research in Higher Education, Vol. 47, No.1 February 2006.
- Crenshaw, T.L., Chambers, E.W., Metcalf, H., and Thakkar, U., (2008). *A case study of retention practices at the University of Illinois at Urbana-Champaign*. SIGCSE Bull., 40:1, 412-416.
- Cuseo, J. (2007). *The Empirical Case against Large Class Size: Adverse Effects on the Teaching, Learning, and Retention of First-Year Students*. Journal of Faculty Development, 21(1), 5-21.
- Dewey, J. (1963). *Experience and Education*. New York: Collier Books.
- Dewey, J. (1966). *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Free Press.
- Freire, P. (1972). *Pedagogy of the Oppressed*. London: Penguin.
- Hausmann, R., Hwang, J., Rodrik, D. (2007). *What You Export Matters*. Journal of Economic Growth (12)1: 1-15.
- Higher Education Authority. (2016). *A study of progression in Irish Higher Education 2012/13-2013/14*. Dublin: Higher Education Authority.
- Jordan, A., Carlile, O., Stack, A. (2008). *Approaches to Learning: A guide for teachers*. England: Open University Press.
- Kuh, G.D., Douglas, K.B., Lund, J.P., and Ramin-Gyurnek, J. (1994). *Student learning outside the classroom: Transcending artificial boundaries*. ASHE-ERIC Higher Education Report No.8, The George Washington University, School of Education and Human Development, Washington, DC.

Kuh, G.D. (2001). *College students today: Why we can't leave serendipity to chance*. In: Altbach, P., Gumpert, P., and Johnstone, B. (eds), *In Defense of the American University*, John Hopkins University Press, Baltimore, pp. 277-303.

Kuh, G. D. (2003). *What we're learning about student engagement from NSSE*. *Change* 35(2): 24--32.

Kuh, D. G. (2009). *The National Survey of Student Engagement: Conceptual and Empirical Foundations*. *New Directions for Institutional Research*, no.141. DOI: 10.1002/ir.283. Wiley Periodicals Inc.

O'Neill, G and Moore, I. (2008). *Strategies for Implementing Group Work in Large Classes: Lessons from Enquiry-based Learning*. In B.Higgs and H. McCarthy (eds). *Emerging issues II: The Changing Roles and Identities of Teachers and Learners in Higher Education*. Cork: NAIRTL. <http://www.nairtl.ie>

Pascarella, E.T., Terenzini, P.T. (1991). *How College Affects Students: Finding and Insights from Twenty Years of Research*. San Francisco, Cal.: Jossey-Bass.

Pascarella, E. (2001). *Using student self-reported gains to estimate college impact: A cautionary tale*. *Journal of College Student Development*, 42(5), 488–492.

Pascarella, E., & Terenzini, P. (2005). *How college affects students*. (Vol. 2): A third decade of research. Jossey-Bass: San Francisco.

Reynolds, M., Vince, R. (2016). *Organizing Reflection*. New York, U.S.A.: Routledge.

Schleicher, A. (2016). *Teaching Excellence through Professional Learning and Policy Reform: Lessons from Around the World, International Summit on the Teaching Profession*. OECD Publishing: Paris. <http://dx.doi.org/10.1787/9789264252059-en>

Shulman, L. S. (2002). *Making differences: A table of learning*. *Change* 34(6): 36-45.

UNESCO (2014). *Teaching and Learning: Achieving Quality for All*. Paris: UNESCO.

Vygotsky, L.S. (1962). *Thought and Language*. Cambridge, MA: MIT Press.

Vygotsky, L.S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.

Wenner, A.J., Campbell, T. (2017). *The Theoretical and Empirical Basis of Teacher Leadership: A Review of the Literature*. *Review of Educational Research*, Vol 87, Issue 1, pp. 134-171. <https://doi.org/10.3102%2F0034654316653478>

6 Appendices

Appendix 1: Collaborative Research Projects

Glanville, G., McDonagh, P., & Becker, B.A. (2013). *Efforts in Outreach Programmes to Inform Secondary Students on Studying ICT at Third Level Providing a Realistic Experience in Coursework and Accredited Assessment*. International Conference on Engaging Pedagogy (ICEP2013). Institute of Technology (IT Sligo), Sligo, Ireland, Dec. 6, 2013.

Glanville, G., Becker B.A. (2014). *Introducing Contemplative Pedagogy to the Classroom Implementation, Experience and Effects on Concentration*. International Conference on Engaging Pedagogy (ICEP2014). Athlone Institute of Technology: Co. Westmeath, Ireland, Dec. 5, 2014.

Glanville, G., Becker B.A. (2015). *Mindfulness and Contemplative Practices: The Voice of the Student*. International Conference on Engaging Pedagogy (ICEP2015). College of Computing Technology (CCT): Dublin, Ireland, Dec. 4, 2015.

Glanville, G. (2016). *Reflective Learning Journals in Computer Science: The Student Experience*. International Conference on Engaging Pedagogy (ICEP2016). Maynooth University, Maynooth, Co. Kildare, Ireland: Dublin, Ireland, Dec. 2, 2016.

Becker, B. A., Glanville, G., Iwashima, R., McDonnell, C., Goslin, K., & Mooney, C. (2016). *Effective compiler error message enhancement for novice programming students*. Computer Science Education, 26:2-3, 148-175, DOI: 10.1080/08993408.2016.1225464

Glanville, G. (2017). *Enhancing Student Engagement: Introducing social learning in computer programming*. International Conference on Engaging Pedagogy (ICEP2017). Griffith College, South Circular Road, Dublin 8, Ireland: Dublin, Ireland, Dec. 15, 2017.

Appendix 2: Staff Awards and Academic Development

Teaching Hero Awards

National Forum for the Enhancement of Teaching and Learning in Higher Education

- Ms. Gemma Davis (Accounting and Finance Lecturer – Business Faculty) - 2014
- Ms. Colette Kirwan (Database Lecturer – Computing Faculty) - 2014
- Mr. Michael Weiss (Networking and Operating Systems Lecturer – Computing Faculty) - 2016
- Mr. Pdraig McDonagh (Networking Lecturer – Computing Faculty) - 2016

Academic Staff Development:

Dr. Brett Becker – MA in Education (Dublin City University) - 2016

Mr. Pdraig McDonagh – MSc in Digital Learning (Dublin Institute of Technology) - 2017

Mr. Michael Weiss – MSc in Computer Science (University of Hertfordshire) - 2017

Dr. Kyle Goslin – PhD in Computer Science (Institute of Technology Blanchardstown) - 2018

Mr. Graham Glanville- Doctorate in Education (University of Hertfordshire) – *candidate*

Mr. Davin Dunlea – MBA - Business (Trinity College Dublin) – *candidate*