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Community-Based Learning: A Primer

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Community-based learning: A Primer

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Abstract

Employers are increasingly demanding graduates with industry-ready communication, leadership, emotional intelligence and social ethics skills. Community-based learning (CBL) is a pedagogical approach which has tremendous potential to produce graduates with these attributes. However, for many early-career lecturers, distilling the insights from the teaching and learning literature, and then producing a well-designed CBL module, can be an intimidating task. What is missing is a primer which presents the core ideas of CBL in a way that is independent of subject-specific jargon. Ideally, this primer should provide the reader with the means of either drafting an initial project plan or, at the very least, knowing where to go to look for more answers.

This article aims to meet this gap. The success of a CBL experience relies on considering a number of factors: thorough planning, critical reflection, effective project management, assessment and effective evaluation of the project. We provide the reader with the means of getting started and highlight the unique management aspects of a CBL project. We discuss the challenges that arise as a result of the interaction of many different parties. Finally, we explore available CBL assessment strategies and provide a roadmap for implementing CBL which integrates these issues.
Keywords: Community-based learning; experiential learning; service learning; graduate attributes; assessment; diversity and inclusivity; evaluation

Introduction

Driven by the need to produce graduates with the skills that are valued by employers (e.g. communication, decision-making, problem-solving, leadership, emotional intelligence and social ethics), academics are constantly planning, designing and refining pedagogical activities that would facilitate the attainment of these skills by students. Community-based learning (CBL) – also known in the United States, Australia, Africa and Asia as “Service Learning” (SL) – is defined as “a form of experiential education in which students engage in activities that address human and community needs as part of structured opportunities, intentionally designed to promote student learning and development” (Flecky, 2011, p.2). CBL has been highlighted in the *Irish National Strategy for Higher Education* (Hunt, 2011, p.76) as a “teaching and learning strategy that integrates meaningful community service with instruction and reflection, to enrich the learning experience, teach civic responsibility and strengthen communities”. Bringle and Hatcher (1996, p. 122) define CBL as a “credit-bearing” educational experience in which students participate in an organised service activity that meets identified community needs, and reflect on the service activity in such a way as to gain further understanding of the course content, a broader appreciation of the discipline and an enhanced sense of civic responsibility. Therefore a CBL project typically entails students offering a community service (e.g. educational, environmental) while being of benefit to the students’ learning (see McDonnell, Ennis and Shoemaker, 2011; Goggins, 2012; Al-Khasawneh and Hammad, 2015).
CBL is renowned for its benefits to students’ skills, personal growth and confidence, and citizenship (for a comprehensive list of benefits see Celio, Durlak and Dymnicki, 2011; Essen, Steven-Truss and Thomas, 2005; and Eyler et al., 2001). Participation in CBL modules also helps students to understand diversity and inclusivity. This is part of preparing them for a diverse workplace (Lamsa and Sintonen, 2006). CBL strengthens communities by providing students with more opportunities to interact and work together, and helps create more responsible, politically engaged citizens with a stronger sense of equality and social justice. Furthermore, CBL has been recognised as a valuable instructional strategy for students with disabilities: Dymond, Renzaglia and Slagor (2011) list a number of positive outcomes for students with disabilities who participate in CBL. These include gains in academic and functional skills, higher self-esteem, improved attendance, fewer behaviour problems, better social skills, greater empathy for others, relationships with nondisabled peers, and improved problem-solving skills.

The benefit from CBL projects is not limited to students: communities also benefit from engaging in CBL projects. These benefits include the usefulness of the services that they receive (e.g. educational, healthcare, civil service) and enhanced relations with the academic institute (for examples see Eyler et al., 2001, also Appendix 1 below). However, the actual impact on the community is not sufficiently studied (Benson, Harkavy and Hartley, 2005; Bushouse, 2005; Cruz and Giles, 2000; Schmidt and Robby, 2002).
CBL is deeply rooted in cognitive and developmental psychology, pragmatic philosophy, and democratic theory (Petkus, 2000). The theory begins with the assumption that experience is the foundation for learning, and various forms of community service are employed as the experiential basis for learning. Here we will highlight the contribution of the Kolb (1984) experiential-learning model, which outlines the learning experience as a constantly revisited four-step cycle, where different learning roles are assumed throughout. Learning is attained by the student through concrete experience, followed by reflective observation, abstract conceptualisation and active experimentation (Figure 1).

**Figure 1: Kolb’s experiential learning theory (adapted from Petkus, 2000).**

*Concrete experience* involves sensory and emotional engagement in a CBL activity. *Reflective observation* involves watching, listening, recording, discussing, and elaborating on the CBL experience. *Abstract conceptualisation* involves integrating theories and concepts into the overall learning process—this is the in-depth thinking phase of the cycle. *Active experimentation* is the doing phase, in which the student engages in a trial-and-error process in which the accumulation of sensory experience, reflection, and conceptualisation is tested in a particular context (Petkus, 2000).
Community engagement forms one of the missions of most Irish academic institutes including Dublin Institute of Technology and Sligo Institute of Technology. (Examples of CBL projects in DIT may be found on the Students Learning with Communities webpage – http://www.dit.ie/ace/studentslearningwithcommunities/).

The primary objective of this paper is to define a roadmap/guideline that would assist academics in successfully incorporating CBL into the modules they teach. To do so we aim to explore successful implementation of CBL in higher education. This will involve examining the components of successful CBL modules, the organisation and logistics entailed, and adequate assessment techniques. We also endeavour to identify some of the barriers (and possible solutions) that hinder the successful implementation of CBL in Irish institutes and elsewhere. We also contribute a primer (Figure 5) which outlines what CBL is, and gives the reader the minimum amount of information to get started to explore CBL.

**Planning a CBL Project**

A CBL project requires careful and thorough planning. As a first step, it is essential to determine whether the selected module is appropriate in terms of achieving its objectives in a community setting, as not all courses are meant for – or are considered useful to – community-based service-learning experiences. Once the suitability of a module is established, academics may embark on defining the CBL experience.

The conceptualisation and planning stage involves a variety of activities: identifying a community need, establishing the learning objectives of the CBL project, establishing the knowledge and skills necessary for the project and determining resources and activities necessary for the project. The planning stage should include the
development of connections with community resources for the project, establishing the type of project, the number of hours required and the expected outcomes or forms of assessment for evaluating project outcomes and student learning (Bringle and Hatcher, 1996). Planning a CBL module is often the most challenging stage; however, civic engagement/community involvement offices within academic institutes offer great support to staff in finding community partners, development and subsequent management of the project, and dissemination of its findings. Once a project concept and community partner are chosen, it is essential to decide how the CBL activities will be incorporated into the module, and to modify the module descriptor to reflect these changes. One of the main decisions that academics need to make when developing a CBL module is whether or not the entire module should involve CBL.

McDonnell, Ennis and Shoemaker (2011) showcased a number of CBL modules at their initial implementation stage. The approach used was to identify suitable activities already in place that could be modified into a CBL project and to ensure that the learning outcomes and assessments were in alignment with the modified teaching and learning activities. In those modules, CBL projects carried weights that ranged between 40 and 60% of a typical 5 ECTS credits module. Once established, such modules may be gradually developed into full CBL modules.

Many resources exist to support planning a CBL module; however, for a practitioner who is eager to just get started, the quantity of advice available can be intimidating. In order to streamline the process of starting to plan a CBL project we have compiled a minimal checklist from various sources in Table 1, which includes pointers on what to consider when planning in project; how to design lesson plans and syllabi; and how to compose a module descriptor.
<table>
<thead>
<tr>
<th>Category</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning checklists</td>
<td><a href="http://jces.ua.edu/wp-content/uploads/2012/06/Picture-27.png">http://jces.ua.edu/wp-content/uploads/2012/06/Picture-27.png</a></td>
</tr>
<tr>
<td>Planning checklist</td>
<td>Appendix I, Service learning toolkit – Michigan state university.</td>
</tr>
<tr>
<td>Syllabi, Lesson Plans</td>
<td><a href="http://compact.org/resource-type/syllabi/">http://compact.org/resource-type/syllabi/</a></td>
</tr>
<tr>
<td>Syllabi, Lesson Plans</td>
<td><a href="https://gsn.nylc.org/clearinghouse">https://gsn.nylc.org/clearinghouse</a></td>
</tr>
<tr>
<td>Module descriptors</td>
<td><a href="http://www.dit.ie/ace/studentslearningwithcommunities/">http://www.dit.ie/ace/studentslearningwithcommunities/</a></td>
</tr>
</tbody>
</table>

Table 1: Planning a Community Based Learning Module.
The first resource (row 1) breaks up the CBL process into four manageable steps: preparation, implementation, reflection and demonstration. Sub-steps under these category headings prompt the practitioner to consider different aspects of CBL. Row 3 provides information on how facilitators can personalize syllabi to encourage volunteerism in STEM oriented programmes. Finally, row 5 provides links to guidance on how to draft CBL module descriptors.

All CBL concepts, partners, modules and learning activities must be arranged in a consistent and efficient manner. Figure 2 presents a first systematization of these inputs as a function of time. This figure should be treated as an exemplar for how to run a CBL project; signposts should be rearranged to suit the learning outcomes which are to be addressed by the module. The spacing between these signposts need not be equal, as greater emphasis on different activities should be captured by this timeline. Activities associated with each of these signposts are listed in a manner which should ensure that the project is run in a consistent way: for example, the structured guidance document should be produced for the partners as near to the start
of the project as possible. The reflective capture process should also be initiated at the start of the project and it should run for the duration of the project.

Implementing and Managing a CBL Project

We draw on the literature to provide recommendations on how to implement and manage a CBL project. Bringle and Hatcher (1996) identify four components which must be considered for CBL to be successful: institution, staff, students and community. We have added industry involvement to this list, given the increased focus on industry-ready graduates following recommendations of the Irish National Strategy for Higher Education (Hunt, 2011, p.75). CBL is an ideal mechanism for attracting industry interest to institute programmes. It also helps to embed industry in the community in which it operates.

Successful implementation of a CBL project relies on the successful management of four aspects (Figure 3). We draw on the literature to provide recommendations on best practice under each of the above-mentioned management aspects:
The management aspects of a CBL project are summarized by the four quadrants in Figure 3. Each quadrant states a relationship between a pair or more of CBL stakeholders. Under each of these quadrant headings, bullet points give an action that can be taken to address this relationship. The benefit of taking the stated actions, and thus addressing the stakeholder relationship, is given at the foot of each quadrant. For example, in the case of the lower left-hand side quadrant, sustainable CBL projects (the goal) can be achieved by managing Higher Education Institute (HEI)–Industry partner–Community partner relationships (the relationship). In many cases misunderstandings arise due to the ambiguity in the CBL project’s goals. Putting a structured learning agreement in place informs the partners of the scope of the project, which serves to manage the expectations of different stakeholders (the action).
**Student-supervisor interactions**

One crucial recommendation for managing student–supervisor interactions is to provide a self-assessment sheet to participating students. The theory underpinning this is Kolb's (1984) model for experiential learning, whose fourth component is based on thoughtful interpretation and comparison of experiences. Additionally, Goggins (2012) recommends that the marking sheet which is used by the supervisors should be provided to the participants. The final critical component, of this management aspect is the timely marking of the project at its completion.

**Monitoring student progress**

With regard to monitoring student progress, Helms (2015, p.13) suggests the use of reflection in order to ensure that deep learning results from the experience. Moreover, reflection can also determine if the students have mislearnt or reinforced an existing prejudice. He points to journals, essays, class presentations, analytic papers, artwork, or any expressive act as a means of capturing reflection. He states that the key to effectiveness is structure and direction. More specifically, positive academic outcomes will result from structuring exercises with specific course-related questions. However, an unstructured personal journal or group discussion will also elicit effective disclosure. Goggins (2012) suggests that a grouped student evaluation survey provides a useful lens on how students are progressing. Student logs, either online or through a log book, are also a useful form of monitoring.

**HEI–industry–community interactions**

Advocates for integrating work-placements and CBL are numerous. For example, Officer (2010) argues that professional practice experiences of CBL and industry placements should be integrated. Blackwell et al. (2001) suggest that accrediting the learning experience, in environments such as CBL, ensures that this experience is
taken seriously, while industry involvement ensures that professional standards have been met. Getting industry involved in work placements enhances the networking opportunities for students as well as giving them an understanding of the workplaces of different partners according to Sheridan and Linehan (2011). An integrated CBL and traditional vocational industry placement is attractive as it engenders a sense of social responsibility that is missing in the traditional placement (Dreuth and Dreuth-Fewell, 2002, p. 263).

Sustainability of CBL is underpinned by successful management of the interactions with external CBL stakeholders. It is vital to make industry/community partners aware that the objective of the CBL activity does not just focus on the student's professional skills but on “the importance of service within the community and lessons of civic responsibility” (see Bringle and Hatcher, 1996). Developing a detailed structure-guidance document for students and community partners is crucial from the outset (Goggins, 2012). Part of this process may involve developing a structured Service Learning Agreement between students and community at the start of a project in order to assist the student and community partner in understanding the learning objectives of the project, clarify the CBL activities in which the students will be involved, and ensure that the student, community partner, and faculty member are aware of their responsibilities in the CBL component of the course (see Table 2).

*Documentation management*

The distributed nature of a CBL project gives rise to the need for documentation management, a process that integrates information from different stakeholders. For example, students’ reports should be sent to the community partner soliciting their
feedback. In the approach outlined by Shinnamon, Gelmon and Holland (1999), this feedback could focus on the partner's view of the impact they perceive CBL has had on students; their motivation for participating in CBL programmes; their satisfaction with their roles and responsibilities, and the levels of community involvement (Table 2). A second source of feedback is the CBL participants themselves. Students’ opinions (and consensus) may be sought to identify weaknesses and strengths of the delivery of the module. If these inputs are properly documented they may be used to feed-forward, and further develop the structure of the community-based project set-up, as well as establishing its value within the university and community.

| Structure guidance for students and community partners | [link](https://www.gtc.edu/sites/default/files/files/documents/Service%20Learning%20Toolkit%20for%20Community%20Partners_0.pdf) |
| Service learning agreement | [link](https://students.case.edu/academic/supplemental/service/courses/doc/contractupd.pdf) |
| Service learning agreement | [link](http://www.ccmountainwest.org/sites/default/files/Sample_Student_Service-Learning_Agreement.pdf) |
| Community feedback form | [link](https://depts.washington.edu/ccph/pdf_files/tools-partner.pdf) |
| Student time log sheet, supervisor evaluation | [link](http://teaching.colostate.edu/guides/servicelearning/pdfs/timelog_evalform.pdf) |

Table 2: Implementing and managing a CBL project

Implementing and managing a CBL project relies on maintaining healthy relationships with the project’s stakeholders. An exemplar structure guidance document, for both student and community partners is given, along with a number of examples of service learning agreements, community feedback forms, student time log sheets and supervisor evaluation forms is given above which should aid the development of similar documents for future projects.
In summary, managing a successful CBL project is akin to curating and developing relationships. Some resources which provide guidance on how to address the issues raised above, and to successfully manage a CBL project, are listed in Table 2. They describe how to outline the structure of a CBL project for community partners; how to compose a service learning agreement; how to solicit feedback from the community; and how to gather student logs and how to evaluate the project. This list is not exhaustive, but it does serve to prompt the practitioner to think about issues, which may not have arisen as part of the initial planning stage of the project.

**Assessment**

Quality assessment of CBL is important to higher education as it provides a way of interjecting CBL into the national dialogue about the quality of undergraduate education (Steinke and Fitch, 2007). For the purpose of assessment, Ash and Clayton (2004) organised the primary learning objectives into three categories: academic, personal and civic. Steinke and Fitch (2007), alternatively, used two categories of learning outcomes: cognitive outcomes (e.g. critical thinking and intellectual development) and graduate skills (e.g. civic engagement and ethical development). Some of the available assessment tools for these learning outcomes are discussed under the three headings below.

*Written assessment*

Reflection has always been central to CBL and its benefits in enhancing the quality of learning are well-documented (Eyler et al., 2001; Blouin and Perry, 2009). It is essential to use reflection prior to, during and following CBL experiences. Despite its centrality, reflection is perhaps the most challenging concept for educators to apply in practice despite its potential for positive outcomes (Rogers, 2001). Welch (1999)
pointed out that students sometimes fail to properly “reflect” and therefore need guidance on how to perform critical and meaningful reflection. This issue is addressed in guided reflective models such as the Articulated Learning (AL) framework (Ash and Clayton, 2004), which assesses students’ academic, personal and civic learning outcomes based on their deep reflections. A development of the AL model, DEAL (Ash and Clayton, 2009) encourages students to deepen their reflections and to examine their experience in light of specified learning objectives for academic enhancement, personal growth, and civic engagement (Figure 4). The successful implementation of guided reflection models (DEAL and AL) in higher education (Lay and McGuire, 2010; Brooks, Harris and Clayton, 2010) and their reported benefits in engaging students and deepening their learning has contributed to their growing popularity. The use of rubrics for the assessment of reflective writing facilitate an objective assessment scheme (Table 3).

Essay-type instruments, using open-ended problems, are in use for the assessment of both cognitive and personal skills (Steinke and Fitch, 2007). Examples of these include the Problem-Solving Analysis Protocol which assesses critical thinking (Steinke and Fitch, 2003), and the framework developed by Coetzee (2012) which evaluates graduate transferable meta-skills and personal attributes. Another instrument is the Cognitive Level and Quality Writing Assessment Instrument which includes rubrics for scoring including a cognitive level skills scale based on Bloom’s Taxonomy. The framework by Coetzee (2012) also includes a rigorous assessment rubric for the evaluation of academic and personal skills.
Figure 4: The DEAL reflective model (Ash and Clayton, 2009).
The model consists of three sequential steps: 1. Description of experiences in an objective and detailed manner, 2. Examination of those experiences in light of specific learning goals or objectives; and 3. Articulation of Learning, including goals for future action that can then be taken forward into the next experience for improved practice and further refinement of learning. This is followed by engagement in service and testing of the learning and/or implementation goal.

<table>
<thead>
<tr>
<th>Reflection resources</th>
<th><a href="https://static1.squarespace.com/static/51a00182e4b00ebe3c66f62/t/522645cbe4b05edeb50d791a6/1378239947935/DEAL+Model+for+Critical+Reflection.pdf">https://static1.squarespace.com/static/51a00182e4b00ebe3c66f62/t/522645cbe4b05edeb50d791a6/1378239947935/DEAL+Model+for+Critical+Reflection.pdf</a></th>
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<td><a href="http://serc.carleton.edu/NAGTWorkshops/assess/oralpresentations.html">http://serc.carleton.edu/NAGTWorkshops/assess/oralpresentations.html</a></td>
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<td><a href="https://www.ncsu.edu/midlink/rub.pres.html">https://www.ncsu.edu/midlink/rub.pres.html</a></td>
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<tr>
<td>Peer-assessment form</td>
<td><a href="http://serc.carleton.edu/NAGTWorkshops/assess/oralpresentations.html">http://serc.carleton.edu/NAGTWorkshops/assess/oralpresentations.html</a></td>
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</tbody>
</table>

Table 3: Assessment resources
**Oral assessment**

Oral presentation is an established approach in the assessment of CBL (for examples see Goggins, 2012; Chan, 2012; De Grez, Valcke and Roozen, 2009). It allows assessors to observe students presenting their in-depth knowledge of a topic or learning experience. Individual or group research projects and fieldwork often use presentation assessment to judge students’ understanding and presentation skills (Chan, 2012). Further, instant feedback is given to the students on misconceptions or evident gaps in their knowledge (Goggins, 2012). The use of assessment rubrics for students’ presentations has markedly enhanced the evaluation process (see Fennessey, Saunders and Fenton, 2011; Hayne and McDaniel, 2013).

Peer assessment may be used as part of the grading process (Deely, 2015). It can empower students by allowing them to become more involved in the assessment process and gives them a level of responsibility. Interviews, although criticised for being time-consuming and largely subjective, is a direct means of assessing students’ learning outcomes. It allows assessors to receive immediate reactions and responses (Chan 2012) as well as allow students to fully live in the learning experience (Regev, Gause and Wegmann, 2009).

**Research scales**

The literature demonstrates a wealth of instruments for assessing the cognitive learning outcomes of CBL (e.g. Bringle, Phillips and Hudson, 2004). Examples of these instruments include the Cognitive Learning Scale, an ipsative assessment that compares pre-participation and post-participation performance (Steinke and Fitch, 2003), the California Critical Thinking Skill Test, and the Scale of Intellectual
Development (Steinke & Fitch, 2007). The Graduate Skills Assessment Test assesses a number of key generic graduate skills (e.g. critical thinking, interpersonal understandings, and problem solving) using multiple-choice questions (https://www.acer.org/gsa). The use of research scales for the assessment of cognitive skills is widely reported (Bringle, Phillips and Hudson, 2004; Hood and Deopere, 2002). On the other hand, a literature search denotes a dearth of research scales for the assessment of personal and civic engagement skills. Examples of such scales include the Civic Attitudes and Skills Questionnaire (CASQ) tool developed by Moely et al. (2002) to assess a range of soft skills including civic action, interpersonal, social justice and leadership skills, and the Community Service Involvement Preference Inventory (CSIPI). Studies in which CASQ and CSIPI were used demonstrated some changes in students’ attitudes and personal skills following the CBL experience (e.g. Payne, 2000; Moely et al. 2002; Hirschinger-Blank, Simons and Kenyon, 2009).

**Challenges**

Student perceptions and community engagement play a valuable part in CBL but also present obstacles. Kruger, Nel and van Zyl (2015) outline how students’ ability to learn is to a great extent affected by their perception of the specific learning environment and refers to the way students view, understand and interpret CBL. If students have a negative perception of the learning environment, they will have a negative attitude towards the learning. Therefore it is vital to understand students’ perceptions and take these into consideration in the design of CBL projects. Marzano (1992) outlined that positive attitudes and perceptions may be encouraged by creating a better learning climate, ensuring the quality and quantity of the resources available and gaining individual acceptance of the students.
Another key challenge is the level of community participation in CBL (see Ponder-Brookins et al., 2014). To address this, all community representatives involved and others affected by the study need to be involved from the beginning of a project to ensure correct equitable decision making and power sharing among partners. Another challenge was the management of outputs so as to collaboratively disseminate the results among all partners that supported all participants involved.

In a study by Kue, Thorburn, and Keon (2015), challenges were presented when implementing CBL in a community with little experience of research. The significant challenges included the need for intensive training, supervision of field staff and difficulty in translation of research materials. To overcome these challenges, Kue et al. (2015) adopted the following approaches: engagement of cultural insiders as investigators; building of community partnerships, including members of the community on the research team; and development of culturally appropriate and sensitive methods and materials. Finally it is extremely important to address the challenges that CBL presents to students. Some of these challenges were identified in a study by Kruger et al. (2015) and include:

- Poor learning opportunities, CBL experience wasteful of students’ time
- Poor monitoring of student attendance at host organisation
- Insufficient training before CBL experience
- Student not knowing what will be expected at host organisation
- Poor communication between host organisation and student and third level institution.
Despite these challenges there is tremendous potential for CBL to enhance professional education as it allow students to apply their background knowledge in real-world settings and provide an important avenue for self-reflection. Addressing these challenges will improve the students’ experiences and in turn improve the success and result in more socially reactive graduates who are able and willing to work in community settings. Some challenges, however, will require creative thinking if they are to be addressed as they arise during a project.

**Evaluation**

CBL is a valuable approach to achieving learning outcomes, which can be demonstrated using effective evaluation. Such effective evaluation can provide a useful way of introducing CBL into the national dialogue about the quality of undergraduate education. Evaluation tools can be designed for formative and summative purposes. Formative tools can be used to shape the process, improve the outcomes and address challenges as they arise. Summative evaluation occurs at the end of the CBL experience to measure the impact of experience on students themselves, academic staff, the curriculum, the community, and on the institutions, and provide feed-forward for the next cycle of the CBL programme.

It is necessary to clarify both the aims/outcomes of the CBL experience at the beginning of the module to assist with the evaluation process. Outcomes may include: students’ attitude and satisfaction; staff satisfaction, experience, and learning; community partners’ satisfaction; and value and quality of service.
It is also important to consider how the evaluation data will be collected (e.g. online surveys, focus groups, structured examinations), and subsequently analysed and disseminated. To that end, we have compiled some useful tools from the literature to assist academics with the evaluation procedure (Table 4).

<table>
<thead>
<tr>
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<tr>
<td>Community partner evaluation form</td>
<td><a href="http://servicelearning.utk.edu/forms/">http://servicelearning.utk.edu/forms/</a> <a href="https://servicelearning.msu.edu/students/forms">https://servicelearning.msu.edu/students/forms</a></td>
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</table>

**Table 4: Evaluation tools for students, staff and community partners**

**Conclusion**

CBL is a powerful pedagogy with great potential for benefiting students’ academic and personal skills. In this study we have provided a brief overview of how to plan, manage, assess and evaluate a CBL project. We also discussed some of the challenges and how they are addressed in the literature. The success of a CBL experience relies on a number of factors: thorough planning, guided reflection, effective project management and effective evaluation. We highlight the importance of induction for CBL students, which may be used to make them aware of potential difficulties which may arise during CBL projects, including time management and conflicts. Finally, in order to encourage student engagement in CBL, it is necessary to be inclusive of all staff and their talents. Smith and Rust (2011) highlight the value of support staff (administrative, secretarial, and technical staff) in academia, and advocate the importance of designing an inclusive CBL project that involves administrative, secretarial and technical staff, as well as students, to share more equal partnerships regarding the same CBL goal. The material in this paper may serve as a “primer” for
academics who are interested in implementing a CBL project (see Figure 5 below). However, academics should consult and liaise with own institute’s civic engagement office for more support on implementing CBL within their disciplines.
Figure 5: CBL primer for early-career academics
References


## Appendix 1: Examples of successful CBL projects

<table>
<thead>
<tr>
<th>Type of service:</th>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CBL participants</strong></td>
<td>First-year medical and pharmacy students, University of Saskatchewan, Canada.</td>
</tr>
<tr>
<td><strong>Description of service</strong></td>
<td>First-year medical and pharmacy students partner inter-professionally to both learn and serve, working with community-based organizations (CBOs) that primarily serve either low-income or newcomer residents of Saskatoon.</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Students described a transformative learning experience that helped them begin to develop understanding and skills to work more effectively with clients in urban underserved settings.</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>Educational</th>
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<td><strong>CBL participants</strong></td>
<td>Year 2, B.Sc. Medicinal Chemistry and Pharmaceutical Sciences, Year 4, B.Sc. Forensic and Environmental Analysis . Dublin Institute of Technology, Ireland</td>
</tr>
<tr>
<td><strong>Description of service</strong></td>
<td>This CBL activity required students to prepare chemistry posters and demonstrate experiments that had been set up by academic staff to secondary school students</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>A marked improvement in student engagement and confidence and their appreciation of how their subject is applied in real-world situations</td>
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<table>
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<tr>
<td><strong>CBL participants</strong></td>
<td>first-year, biological engineering students, Louisiana State University, US</td>
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<td><strong>Description of service</strong></td>
<td>co-create playground designs with the child play experts</td>
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<td><strong>Outcomes</strong></td>
<td>Reported positive outcomes include the ability to apply knowledge of mathematics, science, and engineering, the ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability, and the ability to function on multi-disciplinary teams.</td>
</tr>
</tbody>
</table>