



## Assessing the effectiveness of self-directed learning as a teaching intervention in urban planning education

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### ABSTRACT

Self-directed learning (SDL) is an educational strategy in which students take charge of their own learning. It incorporates the guidance of an instructor in setting learning materials, with students choosing how and when to learn and evaluating their own performance. SDL is utilised in urban planning education and can support the ability of students to address real-world problems they may encounter as a professional planner.

Despite the utilisation of SDL within planning education, there is a limited body of research which assesses the impact of this as a teaching intervention. This paper adds to this body of research by explaining how an Action Research (AR) project was used to assess the impact of an SDL intervention within the University of Dundee's Urban Conservation module. AR is a method of systematic enquiry used by instructors who wish to review their own practice. This AR project enabled an evaluation of the effectiveness of the SDL teaching intervention.

The outcomes of the pilot AR project provide evidence that the SDL intervention was successful in improving student understanding of a range of urban planning and conservation issues. In addition, it gave the students the opportunity to apply their learning from the module to a real-world context, enhancing their understanding of professional practice. The methodology of the AR project could be applied to assess the impact of SDL across a range of other degree modules. In doing so, instructors should remain conscious of the implications and limitations of SDL as outlined in this paper.

**Keywords:** self-directed learning, action research, urban planning education

### Introduction

Despite Self-Directed Learning (SDL) being utilised in urban planning education, there is a limited body of research which assesses the impact of this as a teaching intervention within this discipline. This 'On the Horizon' research piece addresses this gap in knowledge. It does this through an action research (AR) project designed to assess the impact of SDL in the University of Dundee's Urban Conservation module.

AR is a means of systematic enquiry undertaken by instructors when they wish to review their own practice (Graffagnino, n.d.). The process involves investigating an issue and devising an initiative to address it (Times Educational Supplement, n.d.). Once the initiative has been carried out, it is assessed and critically reflected upon (Times Educational Supplement, n.d.). This process helps instructors recognise what their students actually do, as opposed to what they think the students are doing (British Council, n.d.).

This paper introduces the utilisation of AR within urban planning education. It then explains the purpose of SDL, how it is utilised within urban planning education and, more specifically, how it is utilised within the University of Dundee's Urban Conservation module. This module forms part of a Royal Town Planning Institute accredited degree programme. It then describes a pilot AR project that was used to evaluate the

effectiveness of an SDL intervention within the Urban Conservation module and the outcomes of this. A reflection into the project outcomes provides a deeper insight into the effectiveness of the intervention and will inform future iterations of the module.

### Action research in urban planning

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Urban planning has a fundamental role to play in addressing 21st century challenges, from climate change to ensuring equitable access to services and the creation of liveable, resilient places (De Burca, 2023). Thus, within an urban planning education context, AR has been used to involve students in addressing such real-world problems. For example, Lak and Aghamolaei (2019) explained how students were involved in an urban design process to improve their practical understanding of planning practice. Such AR projects have the ability to strengthen student understanding of professional practice and help them to make more informed and ethical decisions (Frandsen & Anderson, 2022).

### Self-directed learning

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SDL involves students taking ownership of their learning, deciding how and what they will learn with the guidance of an instructor (University of Edinburgh, 2023). In SDL, students are also involved in assessing their learning outcomes (Knowles, 1975, cited in Abeyrathne & Ekanayake, 2019). The benefits of SDL can include improvements in critical thinking, research skills, being organised and proactive (Chukwunemerem, 2023). In addition, SDL allows students to learn through their own learning preferences in a manner that suits them (Greene, n.d.). Furthermore, Griffith (1987, cited in Higgs & Boud, 1991, p. 246) argued “effective learning involves interaction with others” and stressed “the importance of learners valuing the contribution that each can make to the others learning”. Campbell (2020) added that interactions between learners and instructors and participation in group work can keep students engaged and help them retain information.

SDL has several challenges which are important to consider when utilising it in a module. Independent learning can prove challenging, even for the most highly motivated students (University of Waterloo, n.d.). Students can suffer with motivation levels, being daunted by too much relevant information resulting in not knowing what to learn and learning only what they are interested in (Rehmani, 2024). Han and Heo (2022) also highlighted motivation levels as a challenge for SDL as well as potential issues with information technology.

### Self-directed learning in urban planning education

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Students studying urban planning at the University of Dundee are expected to undertake SDL. This is similar to other urban planning degree programmes. For example, at the University College of Estate Management (2024), students are expected to spend 35% of their learning time on SDL during the MSc in Urban Planning. Similarly, at Queen’s University, Belfast, SDL is viewed as an essential component of the City Planning and Design MSc (Queen's University Belfast, 2024).

Within urban planning and related fields, SDL is utilised in a range of ways. At the Chinese University of Hong Kong, SDL was introduced into urban design education through a library of resources designed to complement existing study materials (Ameijde et al., 2023). This intervention was found to enhance learning outcomes related to creating sustainable, liveable places. Similarly, at Simon Bolivar University, SDL develops competency in addressing real-world problems (Lara & Ornes, 2018). Maruna et al. (2018) wrote

that urban planning education in Serbian universities utilises SDL as a way of furthering key competencies required to promote sustainable development.

### Self-Directed learning in the University of Dundee's Urban Conservation module

The author introduced an SDL intervention into the Urban Conservation module for the 23/24 academic year. This was to enable students time to attend field trips which provided an insight into working in the urban conservation and planning sectors. Furthermore, these field trips helped to address the gap between education and making the transition into industry.

The SDL task was designed to prepare students for their module assignment which was to critically evaluate a regeneration strategy in Liverpool City Centre. Thus, the task developed students' competency in addressing real-world problems, in keeping with the utilisation of AR and SDL in urban planning education. Liverpool was selected as the basis for the module assignment as it is home to one of the largest regeneration projects in Europe, providing a wealth of opportunities for students to investigate urban planning issues.

The SDL intervention consisted of a suggested reading and viewing list which was provided on the module page on the virtual learning environment. This gave students a foundation on which they could conduct further research. This was done to overcome the possibility of students being daunted by too much information and not knowing where to start.

#### Pilot action research project

This pilot AR project received ethical approval on 8th January 2024, from the Student Human Research Ethics Committee, approval number UOD-ASC-TPG-2023-147. The first step in assessing the effectiveness of the SDL intervention involved students responding to a series of questions using Mentimeter during the first lecture of the module. The Mentimeter exercise acted as a pre-intervention survey. Mentimeter was selected as it allows flexibility in how students input their response (Millmore, n.d.). Furthermore, according to Millmore (n.d.), Mentimeter "improves student engagement and enjoyment of the classes" and is suitable for students at any level. Students were asked to respond to the following questions:

1. I am familiar with the history of Liverpool.
2. I feel I know a lot about Liverpool's regeneration.
3. I understand what heritage values are and can apply these to Liverpool's waterfront.
4. I think Liverpool needed a tall building policy.
5. What is SDL?
6. Do you enjoy doing your own research then discussing what you have learned in class?

Following the period of SDL, students were asked to deliver a short presentation on the subject they were tasked with researching. This allowed the author to evaluate the level of knowledge students had acquired during the SDL task and gave students the opportunity to reflect on their performance and learning outcomes. This was followed up with an instructor-led presentation to consolidate learning. As the Urban Conservation module only had four students, it was also feasible to hold a class discussion regarding SDL

following the completion of all the student-led presentations. This discussion explored questions such as whether the students found time to complete the SDL, whether they read the suggested reading and sought additional reading.

#### **Pre-intervention Mentimeter exercise: initial student responses**

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Although four students were enrolled on the module, only three were present at the first class resulting in there being only three responses to each question. In relation to questions 1 and 2, all responses indicated that students had no, or a limited knowledge of the history of Liverpool, its regeneration and how heritage values related to the city's waterfront. Regarding question 3, two students felt they did not know what heritage values were. One student did but advised they could not apply heritage values to Liverpool's waterfront. In respect to question 4, one student mentioned that Liverpool had lost its World Heritage Status, meaning that further policy intervention to protect the city's heritage had come too late, suggesting they had some awareness that Liverpool needed a tall building policy. However, as all students responded "no" to question 2, this implies their understanding of the regeneration of Liverpool and policy interventions was not detailed.

All students felt they understood SDL. They said SDL was reading outside of class, being responsible for your own learning and it being an independent approach to research. All students agreed they enjoyed SDL and being able to share their findings with others. One student commented that they enjoyed this process as it allowed them to learn from their peers and another stated that having to share their findings in class motivated them to do the required reading.

#### **Results from post-intervention Mentimeter exercise**

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The three students felt they had learned more about Liverpool and its regeneration through the SDL task. One student felt they knew less about Liverpool's history than they did its regeneration. This may reflect a lack of focus on this element of the research area rather than a reflection of the suggested reading materials. All students felt they had learned more about heritage values and could relate these to Liverpool, in contrast with the initial Mentimeter. One student had not read the tall building policy, while another agreed this policy was needed. However, it was not clear from their response if they had read the policy or made an assumption about its significance. The responses regarding the meaning of SDL to the students and if they enjoyed SDL were similar to the initial Mentimeter. However, one student pointed out that they enjoyed SDL as they could focus on things that interested them. Finally, one student saw the process as motivating and of benefit to the rest of the group, bringing different viewpoints to a discussion.

#### **Student presentations and class discussion**

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The students were asked if they enjoyed the student-led presentations after they had all presented their findings from the SDL task. Despite reporting some initial anxiety, all students said this had been a valuable experience and comments were made such as "it was great to hear different viewpoints", "I am glad we did it" and "it was a really valuable experience". Students were also asked if they found SDL challenging, if they read the suggested materials and if they sought out additional reading. No student reported the experience to be challenging. One reported that they had struggled to find the time as they had been working. Two other students reported they enjoyed the process and sought additional reading when a theme took their interest.

### Reflection on outcomes

Students felt the process allowed them to learn from their peers, echoing the comments made by Griffith (1987, cited in Higgs & Boud, 1991, p. 246). Two students reported that during the SDL task they sought additional reading on a topic which took their interest, demonstrating a proactive approach, in keeping with the comments of Chukwunemerem (2023). This contrasts with concerns raised by Han and Heo (2022) that students undertaking SDL may struggle with motivation levels. However, one student reported that they knew more about Liverpool's history than its regeneration, suggesting that they overly focused on a topic which took their interest. This is in keeping with Rehmani (2024) who pointed out that there is a risk with SDL that students may choose to learn what they are most interested in.

From the perspective of the students, the SDL task gave them an improved understanding of Liverpool's history and its regeneration as well as an ability to apply heritage values to the city's waterfront. Their views on the need for a tall building policy in the city were mixed, with it being clear that at least one student had not read the policy. Thus, it was important to discuss this policy and its implications more in the tutor-led sessions to ensure that they had a good understanding of this. No student reported finding the SDL task challenging, contrasting with comments made by the University of Waterloo (n.d.). Furthermore, they did not report being daunted by too much information, conflicting with the concerns of Rehmani (2024).

### Implications and limitations

The SDL task was largely successful, enabling the students to have an improved understanding of Liverpool's history, its regeneration and the ability to apply heritage values to the city's waterfront. In addition, it gave the students the opportunity to apply their learning from the module to a real-world context, enhancing their understanding of professional practice. Given the small sample size and pilot nature of the study, for it to be transferable to other contexts, further research would be required. However, there is potential for the methodology of this action research project to be tailored to assess the impact of SDL across a range of other modules. It could also be utilised across year groups and undergraduate and postgraduate modules. In doing so, instructors should remain conscious of the implications and limitations of SDL as identified in this paper; in particular, that students may choose to focus on those areas of most interest to them, and the possibility of students prioritising employment over the SDL task. To overcome these challenges, it is important for the module tutor to consolidate learning through a tutor-led session.

### Biography

*Sarah Crowe* is a Chartered Town Planner, Associate Fellow of the Higher Education Academy and a PhD candidate, researching how blue green infrastructure and placemaking can combine to increase resilience to the impacts of climate change. She enjoys lecturing at the University of Dundee alongside her studies and has a professional background in urban regeneration, community development and spatial planning. Email: [sycrowe@dundee.ac.uk](mailto:sycrowe@dundee.ac.uk). LinkedIn: <https://www.linkedin.com/in/s-crowe/>.

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Assessing the effectiveness of self-directed learning as a teaching intervention in urban planning education

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