WORKSPACE IMPLEMENTATION – REVIEW AND CALL FOR PARTNERS TO ESTABLISH BEST PRACTICE

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ABSTRACT

Implementation of the workspace, as embodied in CDIO Standard 6, can not be seen as a one off initiative and workspaces will need to continually evolve to deal with a range of factors. These include the aspirations of the educators keen to develop the capabilities of the resource, changes in numbers and/or types of students using the facilities, budget or other resource cuts and developments in CDIO related technology. Preparing for and managing these changes is important for the sustainability of CDIO programmes and this paper calls for partners to establish best practice.

KEYWORDS
Workspace, Implementation, Evolution, Standards 5,6,7,8

INTRODUCTION

CDIO Standard 6 addresses CDIO Workspaces – “Workspaces and laboratories that support and encourage hands-on learning of product and system building, disciplinary knowledge, and social learning”.

All groups undertaking CDIO are likely to focus significant energy around the creation and development of suitable workspaces. These can often be the most tangible immediate indicator of change within an organization and serve as a statement of intent by the programme team.

A number of papers have been presented by CDIO partners relating their experiences and approaches to workspace implementation. Very early experiences in developing CDIO workspaces were presented at the first CDIO conference by Strong and McCowan. (2005)

Some of the earliest adopters also presented their approaches and experiences at the 4th CDIO conference (Fortin et al. 2008), while more recent contributions include those from González et al. (2013), however almost any paper reporting a School implementing CDIO will prominently feature the development of workspaces. Few address the space’s evolution however.

A programme team setting up a workspace will evaluate what it would hope for to suit their educational aims but will need to continually be mindful of a whole range of constraints including space availability, budget, time scale, personnel to support the workspace and conflict with potentially displaced activities.
Moreover, implementation of the workspace can not be seen as a one off initiative and workspaces will need to continually evolve to deal with a range of factors. These include the aspirations of the educators keen to develop the capabilities of the resource, changes in numbers and/or types of students using the facilities, budget or other resource cuts and developments in CDIO related technology such as the rapidly progressing area of 3D printing.

Figure 1 shows some of the key pressures and disruptors which are likely to see CDIO workspaces undergoing a continual process of development and evolution to maintain effectiveness.

**OBJECTIVES**

The aim of this project is to gather CDIO practitioners at all stages in the adoption process, from newcomers to those whose programmes have been running for some time to see how robust initial implementations of CDIO workspaces are to the practical demands placed on them by a range of external and internal demands. From this best practice can be established to help implementers structure spaces to be robust to change and to establish methodologies to cope with the changes.

**CURRENT STATUS**

At our own institution we have seen our CDIO workspace evolve over the four years we have been running programmes. Our primary pressure has been an increase in intake which has exceeded our original capacity resulting in infrastructural changes to the workspace to allow us to maintain the teaching philosophy as intended.

Issues we are aware that colleagues are facing include major issues such as net loss of space during University restructuring to more minor issues such as fixtures and fittings purchased to support activities not proving as effective as was hoped.

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QUESTIONS FOR FUTURE WORK

We would like to develop best practice in relation to setting up suitably robust workspaces which can survive and adapt with time and to share experiences on dealing with change?

- What changes have had to be made to workspaces?
- What were the drivers for change?
- Could the changes be anticipated?
- Were mistakes made in hindsight?
- What were your best moves to allow evolution?

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Gareth Thomson, is Head of Mechanical Engineering + Design (MED) at Aston University. His current research relates to Societal issues, Group Working and Resource management.

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