Solving the care conundrum
What can STEM facilities do?

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Abstract
Increasing numbers of students are entering Higher Education (HE) having left state care. Of all the faculties in Kingston University (KU), it is the recently formed faculty of Science, Engineering and Computing (SEC) that has the highest number of Care Leaver (CL) students. Of the 114 students identified as CLs studying at KU, 63 are studying in SEC. Care Leavers have usually developed mechanisms for self reliance, meaning they become isolated and face issues that affect academic performance. Considering that CLs account for less than 1% of all SEC students, supporting them specifically can be problematic. This does not mean that mechanisms for involved support with CLs shouldn’t be developed. The collective capabilities and experiences of CLs themselves, if well co-ordinated can be a powerful mechanism for support, progression and success.

We describe the challenges that CLs face in general; what a large STEM faculty needs to consider with this particular group of students, and work that the KU Widening Participation unit in collaboration with the School of Computing and Information Systems are doing (within SEC) towards building sustainable support for CLs.

Keywords
Retention, widening participation, care leavers, STEM
1. Care leavers

1.1 Profile of a care leaver

CL students are among a number of groups that are supported under University Widening Participation (WP) initiatives. Before becoming Care Leavers, these individuals are classified as Looked After Children representing the fact that they are usually placed in the care of foster families or residential units. The circumstances around ending up in state care are varied for example, some are unaccompanied minors entering the UK as refugees, and those whose parents are unable to continue looking after them. A fairly large proportion suffered abuse or neglect before coming into care. A care order is issued by the court to effect their placement into State care until they reach the age of 18, when the order automatically ends and they have to look after themselves as CLs: instant adults (Rogers, 2011).

The percentage of CLs entering HE is small compared to the total number of CLs in the UK although various efforts are slowly increasing numbers transitioning to HE (Jackson et al, 2011; Rogers, 2011). An action research project commissioned by the Frank Buttle Trust to look at CL experience of HE found that positive educational experience whilst in care along with carers who supported educational development made a significant impact in the CL decision to enter HE and progress (Jackson et al, 2005).

Young adults who leave care can receive support from Social Services up until they are 24 years old. Support offered and routes to access vary greatly between local authorities and the processes can be confusing, meaning a number of CLs don’t receive the levels of assistance to which they are entitled. In a number of instances, particularly so with residential CLs, the individual will have to find new accommodation. The sense of finite financial and pastoral support is felt while also coping with the emotional and physical transition to realised independence (Dumaret et al, 2011; Höjer and Sjöblom, 2009; Rogers, 2011). As independent adults CLs have to work directly with social services to get financial and accommodation support. This can be overwhelming and in some cases creates problems around securing funding on time. This period coincides with the typical time for studying a HE course so CLs are faced with a number of tensions both externally and academically which can make success and progression far more challenging for them than the typical university student (Chirnside, 2009; Driscoll, 2011; Leonard, 2011).

A picture of the issues and challenges that CLs face starts to emerge where trust, isolation, self-reliance, instability, cognitive overload and limited guidance are present from the outset of their studies (Cameron, 2007). While a lot of their issues may seem outside of support a STEM faculty can provide they form part of the external environment that overlaps with the academic environment where complications in one have a marked impact on the other, an example follows.
Sienna, a level 4 computing student stopped attending in 2010 due to depression and serious issues in her personal life (became street homeless in September 2011). She was exceptionally allowed to repeat as if for the first time in 2011 after negotiation with the SEC Faculty. Student and social worker, met with the WP team in autumn 2011. Sienna was still suffering from severe depression and not fit to study. It was agreed with her Social Worker to meet again by mid-November and decide on the best course of action as deadline to defer studies with mitigating circumstances was 31st November. The WP team met with her again and she sought to defer studies until the following year. She was advised of the process to do this and successfully deferred. Sienna’s social worker contacted WP just before Christmas to advise that the student is feeling more positive and has met with SEC Student Support regarding possible access to library etc. to prepare for return to study next year.

One can imagine an on-going balancing act to maintain a stable internal (mental) environment while dealing with the stress created by their (external) situation and (academic) studies. The stress created by these environments can affect motivation leading to academic under-performance and eventual disengagement (Cole and Fernando 2011). CLs are particularly vulnerable to this cycle.

1.2 Care leavers in STEM faculties

On the 1st August 2011 Science, Engineering and Computing (SEC) officially became a faculty of KU. It is the largest of the university’s faculties serving as home to several thousand students. SEC is also home to the largest number of CLs (63) anywhere in the university yet they make up 0.7% of the student population. There has been a rationalisation of the number of student support staff in SEC as a result of restructuring meaning the small group of vulnerable adults that are SEC CLs will be competing with all students for adequate support.
Over half of all CLs studying at KU are doing so within SEC. Nevertheless they account for less than 1% of all SEC students. Differentiating between regular students and vulnerable young adults such as CLs in terms of student support in a super faculty can be difficult particularly when the negative impact of a poor support experience can be significant for a CL. Of the 63 CLs in SEC 22 have failed to progress to the subsequent academic year - over a third of CL students. While not all of these withdrawals are within the control of SEC student support, more clearly needs to be done to identify what the retention issues are and work to support this particular group of students.

A CL student will have a negative view on their capability and self-worth. This combined with external and academic stress creates a volatile situation where failure to progress or withdrawal from the course is heightened. STEM subjects tend to have rigorous schedules and a variety of assessment demands, perhaps more so with the Science based subjects. From a total of 114 CL students at KU, 29 failed to progress and 22 of them were from SEC.

An example can be found with Henry, a Level 5 Science CL student and diagnosed dyslexic. Having come to the UK as an unaccompanied minor, he was living with a foster family for the 5 years leading up to university. Henry has to participate in time-limited assessed labs as part of his course. His dyslexia creates a significant problem for him when it comes to this type of assessment. He was told that he would not be entitled to extra time in light of his dyslexia. Henry failed the lab the first time due to a labelling error and could ill afford to fail the assessment again. The situation caused a significant amount of distress for him and as a CL he had no strong relationships to offer familial support and guidance. The incident only served to amplify his self-doubt and low morale and he had decided to withdraw. Had it not been for the intervention of KUs Widening Participation (WP) team, successfully resolving the matter, he would have not been able to continue.

2. Supporting care leavers across the university – strong roots but no STEM

2.1 Widening participation supporting care leavers

During a recent set of workshops and interviews with KU CLs there were three main areas of concern:

1. Source of assistance/guidance
2. Finances
3. Career – and life after graduating
In the vast majority of cases, KU CLs were dissatisfied with their social worker and other means of assistance with faculty level support being one of these. Finances were a persistent concern that seemed to be ongoing particularly with regard to covering accommodation and food expenses. Much of the financial concern revolved around issues when dealing with social services and student loans companies. Finally, KU CLs expressed a lot of anxiety around finishing University and what they would move on to. When a CL student graduates from study or reaches the age of 24, all local authority assistance is withdrawn and for most CLs there is no family to stay with while they search for employment etc.

KU was one of the first six HE institutions to be awarded a Quality Mark from Buttle UK for their commitment to supporting local authority care leavers and KU’s recognition of the particular challenges faced by looked-after young people. The Widening Participation unit has a commitment to supporting CLs comprising:

1. Money bursary
2. Dedicated staff contact for studies and beyond
3. FastForward enhanced induction event
4. Employment events

The key support element beyond the financial is the dedicated contact within the WP team. This particular individual provides end-to-end assistance for CL students on any issue they encounter, be that matters on-course or problems with local authorities. The enhanced induction event prepares CLs for life at university and guidance for coping with the first few weeks as a student.

Support within the SEC faculty is not as involved as the dedicated point of contact within the WP team. The dedicated contact in WP will generally refer students to SEC specific support services, while getting directly involved when issues arise. Beyond this involvement there is a disconnect between the support offered within SEC and the WP team as support staff within the faculty do not have a good understanding of what it means to be a CL or what they need to be aware of when dealing with CLs. There is currently no specific training given to student support staff regarding working with CLs although there are plans within WP to offer this in the near future.
Returning to Henry, the Level 5 Science student, he has had limited engagement with SEC support due to a lack of confidence in them. Henry is very stressed about his situation and has only managed to get as far in his studies as he has because of the support and close bond he shares with Claire, a WP officer. Henry has said “Without Claire’s help I wouldn’t be here”. He voices his concern over getting support in SEC as “Sometimes they don’t know themselves”. A couple of less positive experiences with SEC support has resulted in Henry now going directly to Claire when he needs any assistance thus placing an overhead on her.

3. Building sustainable care leaver support in STEM and beyond leveraging the collective

3.1 Preliminary findings

With resources to support students already stretched in SEC implementing solutions that require greater time commitment from student support would not be sustainable. CLs need focused support but also carry a wealth of experience and solved problems that could be shared to support other CLs. The KU WP team have been running a number of initiatives that link into a bigger project that will connect CLs, WP staff and SEC support with one another to collaboratively tackle issues, identify common patterns that lead up to issues and move to resolve these as a community.

3.1.1 Concept development and experience sharing workshops

These workshops, running since November 2011, bring together a group of CLs to collectively agree on the definitions of concepts that affect them and to share the more personal meaning of those concepts. This activity allows for the development of shared values among the groups of CLs. The students are then asked to annotate a diagram by placing the defined concepts within the areas they have the most impact. A CL student will then explain the positioning of the concepts and significance to them in terms of experiences, the other CLs will engage in discussion offering suggestions and sharing their own experience.

Students are also given a series of questions to answer and share with the group to exchange views and offer their experience. The activities are done individually and then optionally shared if desired. All completed activities are taken by the WP team, who then use a sharing and collaboration tool to make them available digitally so that CLs and WP/SEC staff can discuss
3.1.2 Action learning groups

Action learning has found widespread use in leadership development. The approach involves a small group (action learning set) coming together to go through current experience on their work which in the case of CLs would be looking at their study and environmental factors. The group will question the member on issues being presented, actively analysing and exploring the issues from their perspectives. This gives the member sharing their issues a multi-faceted view of their issues with ideas generated for possible solutions. The group of CLs are managed by a facilitator so that time is well managed, members who have tabled issues get a chance to explore them, the group are kept focused and the rules of conduct in the meeting are maintained. CLs have found this approach very beneficial particularly as they are looking at issues with a group that understands the complexities of the CL student’s situation.

3.2 Monitoring and Engagement

3.2.1 Monitoring of engagement through the VLE

The typical response to difficulty during academic study is for students to disengage from their course. The vulnerable nature of CLs who are usually isolated, coupled with the stresses of the academic and wider external environment put them at elevated risk of disengagement. The identification of disengaged students and their re-engagement within HE has traditionally been a resource intensive process, further compounded by the unreliability of student registers. The Student Liaison Team (SLT) within the KU faculty of SEC along with the School of CIS devised an approach to measuring engagement based around student interaction with the institutional Learning Management System (LMS) (Rook et al, 2011).

Data is extracted from the LMS for analysis and students are ranked on a disengagement severity scale. Those who are identified as disengaged or at risk are placed into the Student Review Interview Process. This involves contacting, interviewing and monitoring (via LMS) the student with a view to successful re-engagement. Since the recent deployment of the service there has been an improved rate in student re-engagement. Adaptations are currently underway, via funded work from the KU WP team, to enable a variation of the process when a disengaged student happens to be a CL. In the adapted system, engagement data from the LMS would be cross referenced against registered CL students in SEC. Where a match was found, an alert would be sent to the WP team who would meet with the CL student and their social worker (if required) to assess the causes of disengagement. The CL student would then go through the re-engagement process as usual except that the WP team would continue to monitor engagement through the LMS and would arrange regular progress meetings with the CL.
3.2.2 Measuring academic stress

Students in HE are under academic and non-academic pressure. Those experiencing pressure may be unable to recognise it, or to describe how they are academically coping and therefore are unable to seek help.

Research conducted by one of the authors, a member of the School of CIS, shows that pressure does not happen in isolation and that there is a tension between the balance of a student’s family, social, and employment life, with their academic life. This balancing act is far more complex in the case of CL students who do not have well established support networks such as family and have to deal with greater pressures than the typical student. Disruption of the balance is recognised by the student being unavailable to participate in academic activities such as lectures, workshops, and group work; and in missing deadlines – disengagement with study. This can impact on a student’s progression, and may lead to them dropping-out of HE. This is a problem area for CLs in SEC where over a third have failed to progress or have withdrawn from study.

The socio-cognitive motivational behavioural diagnostic framework, or socio-cognitive framework (SCF) gives an indication of academic coping ability in positive or negative terms. From this the evaluator, a member of the SEC SLT, can determine whether support would assist the student and work through what action needs to be taken. A self-assessment variant of the SCF is actively being developed with a view to provided an electronic version of the tool that CLs would regularly complete as part of a continuous support provision. The diagnostic framework can be integrated with other institutional student support systems, such as engagement monitoring to provide an innovative and cost-effective mechanism.

4. Conclusion

With the proliferation of STEM faculties consisting of thousands of students and care leavers forming an insignificant number then the danger of them falling through the cracks increases. With the government initiative to place students at HE’s heart (DBIS, 2011) there is added pressure on universities and in particular STEM faculties to be seen to provide, to monitor, to increase retention, and if not will be answerable to students as well as government educational bodies. We have presented an innovative range of measures which begins to provide a framework of continuous support centred on CLs, a vulnerable student group.
5. References


