

The Career Adapt-ability Pilots Project

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Executive summary

The current policy context - with higher fees in English higher education institutions and league tables which drive student choice, making extensive use of destination data - has put a spotlight on career development services. These services seek evidence in relation to employability and employment to measure and demonstrate their impact.

The current graduate labour market is neither static nor stable and graduates are likely to experience a series of transitions as they move through shorter term posts during their working lives. Individuals will need to adapt to different circumstances and work contexts. Employability, therefore, requires individuals to adapt to change – to develop ‘career adapt-ability’. Savickas (1997) identified adapt-ability as the readiness and resources to cope with transitions and traumas, and a recently developed inventory uses a four-factor structure to measure this concept:

Concern: developing a positive optimistic attitude to the future

Control: exerting a degree of intra-personal influence on their situations

Curiosity: broadening horizons by exploring social opportunities & possibilities

Confidence: believing in yourself & your ability to achieve your goal

This report details a recent project that aimed to integrate the concept and its accompanying measurement instrument (The Career Adapt-abilities Inventory) into the career development and employability activities of six HE institutions. The six pilot studies explored the use of the inventory in relation to work placements; mature learners; targeting interventions towards particular student groups; exploring its potential as a vehicle for institutional change; and as a ‘standalone’ online resource.

Findings from the pilots:

- Career adapt-ability can offer an appropriate framework to unify discussions with academic and administrative colleagues and it is feasible in principle to introduce the Career Adapt-abilities Inventory on an institution-wide basis. However, there is a danger in assuming linear development of the adapt-ability dimensions and directly correlated increases in scores, which are based on self-perceived ratings. Ratings may decrease initially as self-awareness increases, thus direct use of scores as a measure of change may produce misleading results in the short term.
- Patterns in individuals’ scores emerge quite quickly, but individual feedback can be time consuming. Using benchmark scores and general guidance can mitigate this to some extent.
- The inventory can be used with groups of students from previously identified populations e.g. courses with low graduate destination results, students identified at career registration audit etc. to identify individual need, and target specific resource.
- Targeting students with scores in defined ranges in specific factors for particular career development interventions may be both individually useful and enable greater accuracy in resource allocation.
- Moderated use of the inventory as a reflective tool can be an effective means to facilitate an individual’s reflection on their learning.
- Career adapt-ability concepts fit well onto learning from work experience and to the experience of coping with transitions between university and work contexts.
- As with any student intervention, timing is important, both in terms of student perception of relevance and appropriate timing of any resulting intervention.
- There is a great deal of interest and enthusiasm within the field of career development in the concept and the inventory.
- Practitioners using the inventory should be fully briefed and supported in the concepts underlying the instrument to incorporate it into their practice.
- Scores from the Career Adapt-Ability Inventory (CAAI) online and their accompanying signposting to action were generally perceived to be useful by students who participated. It was noted, however, that that there was a need to make the underlying concepts readily understandable, so that the purpose of the

inventory was clear, which in turn would help to manage student expectation. An online version of the inventory is likely to work best when moderated and supported. However, there is unlikely to be sufficient resource within careers services to ensure that its use could always be moderated; thus the focus for any further work should be on making it more usable and useful via amendments and further testing if possible.

- As a result of dissemination and discussion of the project, it has been noted that trend data for the inventory over a number of years may show useful patterns in student perceptions of their adapt-abilities over their course of study, which could inform career development planning on an institutional level.

This report accounts for development funding provided by the Higher Education Academy (HEA) in 2013/14, and focuses on a particular phase of research and development activity. However, the inquiry predates the HEA project and is continuing beyond. Recent activity is available via:

<http://www2.warwick.ac.uk/study/cll/othercourses/careerstudies/aboutus/collaborations/caip>

The authors invite comment and interest from higher education institutions who would like to explore using career adapt-ability as part of their employability strategies, as we continue to explore how its use can be developed and evaluated.

I. Introduction

Career development and employability services in universities represent one of the many ways that the higher education (HE) sector connects with the knowledge economy. This work ranges from institution-wide employability strategies to one-to-one at the individual level. It includes curriculum development and work-related learning as well as specific interventions for sections of the student community with particular needs and interests, such as employability awards. It relates both to individual students' aspirations and abilities as they progress through higher education and to their initial attainment in the labour market as they make their early transitions.

The graduate labour market, however, is neither static nor stable. Rather, it is susceptible to global economic turbulence. Thus, focusing on individual attainment or 'initial employment' underplays the individual's ongoing capability to survive and thrive in the job market. Employability, therefore, requires individuals to adapt to change – to develop 'career adapt-ability'.

Whilst response to contextual change has been considered in a wide range of career development theories (Arthur and Rousseau, 2001; Hall, 1996; Patton and McMahon, 2006), it is a particular focus of recent research on career construction by Professor Mark Savickas. Through this work (2008 to 2013), Savickas and others have developed a model of career adapt-ability, defined dimensions of adapt-ability competencies and a psychometric instrument to measure them and made this new theoretical concept available to career development practitioners.

This report details a recent project that aimed to integrate this new theoretical concept and research instrument into the career development and employability activities of a number of HE institution pilots.

Section 2 gives an overview of career adapt-ability and contextualises the pilots with a summary of key themes in career and employability work in UK higher education. It presents career adapt-ability as a useful and timely concept worthy of integration with practice.

Section 3 gives background to the project, including the development of the UK instrument by the same research group and the ideas behind the pilot projects. Sections 4 and 5 go on to report on project activities and outcomes in more detail, describing the project's timeline and the six distinct pilots that were carried out. In Sections 6 and 7, the learning and key outcomes of the project are summarised and future recommendations are presented.

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The authors invite and welcome comment and interest from higher education institutions who would like to explore using career adapt-ability as part of their employability strategies, as we continue to explore how its use can be developed, and evaluated.

2. Overview of career adapt-ability

2.1 What is career adapt-ability?

This section looks at the idea of ‘career adapt-ability’, particularly its origins and how it fits into the lexicon of career development theories. It looks at the four ‘adapt-abilities’, and their definitions, then goes on to consider the particular value of this theoretical framework in relation to higher education career development and employability work.

The study of careers has a legacy of over 100 years of research and scholarship closely linked to the development of practical means of career support. Inkson et al. (2014) offer one of many useful overviews of career studies, charting the development of sociological, psychological and organisational understandings of career, each with their own strengths and limitations. These theories of career development are studied in the initial and continuing development of career development practitioners. The range of practices in place to support career development and employability can be better understood through the lens of these theories, and they can enable us to surface our own personal views as to what career and employability mean and what makes for good career development support, in relation to higher education and the graduate labour market. Career adapt-ability’s antecedents can be traced back through vocational psychology, a field which had traditionally been dominated by matching, or ‘trait and factor’ approaches with the underpinning assumption that:

People are different from each other; so are jobs. It should be possible by a study of both to achieve a match between person and job. (Law, 1981: 143)

The focus on **initial choices** later developed into life-span perspectives which looked at how individuals change throughout life and introduced the concept of **vocational maturity** (Super, 1990). As part of a lifespan stage development theory, such maturity was presented as the result of growth and exploration stages, typically reached at around 25 years of age. Mark Savickas (1997), a student of Super’s, has gone on to develop this work into career construction theory, the organising framework for career adapt-ability.

Two significant factors have led to the paradigm shift from maturity to adapt-ability. The first is a move away from theories based on logical positivism, with its emphasis on proof and generalisability, to a social constructionist perspective which foregrounds the realities that people construct for themselves and their career, and prioritises the development of their own understanding of this process. The second is structural changes to the labour market, with less stability and more frequent points of transition.

Career adapt-ability has recently been defined as:

The capability of an individual to make a series of successful transitions where the labour market, organisation of work and underlying occupational and organisational knowledge bases may be subject to considerable change’ (Bimrose et al, 2011, p.ii)

This backdrop of change has led to shifting career patterns, and it is into these changing contexts that recent graduates will develop their careers.

Savickas argues that these changes require career development practitioners to reconceptualise the interventions they offer. He charts a move from an emphasis on matching people to stable jobs they could hold for their whole life to one of career management for those seeking to ‘climb the career ladder’ in hierarchical organisations. A further shift sees more and more individuals’ careers comprising a series of short term assignments and projects of three to five years’ duration. With working life therefore being punctuated by a series of transitions, individuals will need to adapt to different circumstances as well as being equipped to survive work traumas that may befall them.

Savickas considered the implications of this paradigm shift from 1997 when he identified adapt-ability as the readiness and resources to cope with transitions and traumas. Since then, the theoretical model has been furthered by an international team of researchers who have developed definitions, a research agenda and an inventory, ensuring cross cultural equivalence across all parts of the research. Savickas outlines four components, shown in Figure 1 below:

Figure 1 The four components of the model (Savickas, 1997)

Adaptive	Readiness	To be adaptive is to possess the personality traits of an individual who is flexible and proactive and ready to respond.
Adaptability	Resources	Resources for coping, these are the attitudes competencies and beliefs required to process transitions. Career practitioners can help develop these resources.
Adapting	Responses	The behaviours that individuals demonstrate and the actions they take as they adapt, such as making applications or building networks.
Adaptation	Results	The outcome when transition takes place.

This specifies the elements involved for individuals to be **ready, willing and able** to adapt when needed. Savickas (2013) explains this with the analogy of airline passengers who are seated by the emergency exit being asked if they are ready, willing and able to help in an emergency. Whilst all three elements are important, the actual behaviour is not needed unless the emergency occurs. In this case, the adaptation is the outcome after the transition or trauma occurs.

Whilst adaptation could be measured by a range of success indicators such as reported satisfaction, mental health and wellbeing; in the higher education context, this forced transition occurs at the end of a programme of study. As such, destination data could be argued to be one appropriate adaptation measure and we will return to this later.

Savickas goes on to articulate four different adapt-abilities, the psycho-social competences that comprise the resources for coping. These are:

Concern

The key question here is “Do I have a future?” Individuals with high concern are seen to be looking ahead, scanning their environment for the need to change and taking a planning, future oriented approach to their career.

To lack concern is to be vulnerable. Individuals with low concern often do not engage with career development services and practitioners need to develop outreach programmes to help them believe in the future and create hope, extend thinking, create sense of continuity between today and tomorrow.

Control

Characterised by the question ‘Who owns my future?’ control refers to the intra-personal processes that foster self-regulation rather than the interpersonal processes that impact it. High control is evidenced through a disciplined, organised, deliberate approach to moving through work life.

Curiosity

Moving on from a position of hope and responsibility, curiosity addresses the question ‘what will I do?’ It involves exploration of options, through experiences or daydreams, the seeking of information, clarification of values and learning more about the world to allow a sense of calling to emerge.

Confidence

Finally, confidence refers to the self-esteem, self-efficacy and courage to give a positive answer to the question ‘can I do it?’

With these four dimensions as the four legs of a table, a psychometric scale with a four-factor structure has been developed (Savickas & Porfeli, 2012) to form an inventory of adapt-abilities to be used in conjunction with the overall model shown in Fig 1.

With confirmatory factor analysis supporting the validity of the model, and strong correlations with a number of related factors demonstrating good convergent validity for the instrument, the international research group are now exploring which interventions are effective for developing different adapt-abilities.

2.2 The higher education context

We now lay out a number of contextual factors present in the higher education employability context in the UK that lay the foundation for the use of career adapt-ability and argue why this is a particularly timely and useful approach.

The shifting policy context with higher fees in English institutions and league tables which drive student choice, making extensive use of destination data, has put a spotlight on career development services. As these services seek to measure and demonstrate their impact, they look for evidence in relation to both employability and employment.

Taking 'employability' first, this term is frequently defined in practice as the capacities contained within an individual. A common definition in use is that of Yorke (2006):

A set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy. (p.8)

Whilst recognising that this focus on individual characteristics is not universally accepted (Holmes, 2001; Hinchliffe and Jolly, 2011) there remains in practice a strong pull towards defining those achievements and embedding them into the curriculum and student experience (Dacre-Pool and Sewell, 2007; Pegg et al, 2012).

Moving on to 'employment', a related problem emerges in that destination data as a measure of employment at a particular point in time are arguably not an appropriate measure of these characteristics of employability. Whilst it is often viewed as a sufficiently strong surrogate from which to draw conclusions, others point to the impact of labour market fluctuation and the role of employers in controlling the dynamic:

If five well-trained brain surgeons applied for a suitable vacancy, it is inevitable that four surgeons will not get job offers. ... Employability cannot ... be defined solely in term of individual skills or characteristics. This is because it exists in two dimensions – the relative and the absolute. Virtually all policy statements on employability fail to grasp this duality of employability. (Brown and Hesketh, 2004, p24)

It is not the place of this report to explore arguments for and against causal links between the higher education experience in general and the work of career and employability services in particular, and either the embodied employability or actual employment of graduates. Suffice it to say that this is contested and there remain both ethical and practical concerns in using the lagging measure of employment as a performance indicator for career services. Nevertheless, career development practitioners remain mindful of the impact of employment data on institutional positioning.

Career adapt-ability offers a way through this minefield, not only by providing a framework that is directly relevant to labour market outcomes, but also articulating something that can reside within, and be led by, the individual.

For HE career services, it is a useful articulation of what it is that means that some graduates operate more effectively than others. This means that rather than accepting structural factors as a reason why career

transitions are challenging, practitioners can focus positively on the psycho-social competences that can be developed to overcome barriers to career success.

Building on the work of Savickas (2013), figure 2 below attempts to map some of the dominant concerns within contemporary career and employability work with the four adapt-ability dimensions, highlighting the potential for career adapt-ability to provide a theoretically informed unifying framework within this crowded space.

Figure 2: Adapt-ability and contemporary career and employability work

CONCERN	Engagement of students with their learning experience and with career development processes in general.
CONTROL	Initiatives related to personal development planning which encourage the setting and articulation of goals and reflecting on experience to identify learning outcomes
CURIOSITY	Widening of student horizons through work related learning, access to career information, alumni mentoring and other outward facing initiatives.
CONFIDENCE	Concern for student well-being and mental health, activities such as student representation and societies which enable students to plan and enact student led events

3. Background to the project

3.1 Recent developments in career adapt-ability

Between 2008 and 2010, a team of psychologists from 18 countries produced an operational definition of career adapt-abilities and jointly constructed a 24-item, four-factor psychometric measure in the English language which would be appropriate for use in all member countries to assess adapt-ability (Savickas & Porfeli, 2012). The resulting Career Adapt-Abilities Scale – International Version 2 (CAAS International) was then validated quantitatively in 13 countries, e.g. Porfeli & Savickas, (2012); Dries et al (2012); Tak (2012), and the results suggested that the scale measured the same constructs in the same way across different countries. The inventory makes a number of statements and asks how strongly, from one (not strong) to five– (strongest), an individual feels they are in possession of the quality or attribute in the question. Responses are summed to obtain factor and adapt-ability scores.

3.2 Career adapt-ability in higher education in the UK

The UK contribution to the above research was to the group which pursued a qualitative path to assessing adapt-abilities (Bimrose et al, 2011; McMahon, Watson & Bimrose, 2012) and thus the measure itself was not at that time tested in the UK. In 2013, a UK-based consortium, comprising researchers and careers practitioners, subsequently adapted and validated the CAAS International for use in the UK higher education context (Wright, Bimrose & Frigerio, in prep). The resulting version of the inventory was named the Career Adapt-ability Inventory - UK (CAAI-UK)

This work was presented at appropriate national professional conferences with the aim of involving UK HE career practitioners with the work from the outset, and a list of interested practitioners throughout the UK was compiled. Once the measure had been validated, the group's intention was to undertake further work to investigate the applicability of the CAAI-UK to the work of careers practitioners, academics and HE institutions. A small grant from the HEA made this work possible, and this report describes the CAAI-UK Pilots Project which resulted.

4. Methodology: Working with the Career Adapt-Abilities Inventory (UK version) CAAI-UK

4.1 Setting up the project and its aims

A steering group was formed and terms of reference were agreed (see Appendix I for membership and terms of reference).

The project aims were to explore:

- The nature and extent of any impact of using the CAAI-UK on the career awareness, planning and decision making of students within a range of UK-wide universities.
- The impact that such a tool might have on the ability of university careers services (and other guidance sector colleagues) to more effectively tailor services for individual need so as to better allocate resources and provide the most effective interventions at an individual level.

4.2 Call for bids

A call was sent out to those who had expressed an interest in the project at the previous stage (including members of the original consortium), asking for applications to run pilot projects exploring the feasibility of using the CAAI-UK in:

- Targeting careers guidance interventions
- Allocating resources to greatest effect
- Demonstrating careers guidance impact at individual and institutional level
- Encouraging students' reflective career development and effective action planning

As a result of this process, six pilot projects took place between 1 February and 30 June 2014. The institutions involved represented a geographical spread as well as involving a range of the types of HE institutions in the UK. (A list of the institutions can be found in the Appendix, section 9.3).

A symposium was held in July 2014 after completion of the pilot projects. This added to the data collected by disseminating the results from the pilot studies to a wide audience of interested parties and collecting ideas and opinions from delegates during the symposium to enrich the findings from the pilots. These ideas and opinions are integrated into the individual pilot project reports below, and the authors' thanks go to all those who attended the symposium in July 2014 and who thus contributed to the project in this way.

4.3 Project timeline

Figure 3: Project timeline

Date	Project Stage
September 2013	18-month project proposal to HEA Academic Lead - employability
October 2013	Seven months' funding offered and project restructured to fit available funding
4 November 2013	First meeting of Steering Group
December 2013	Call for pilot projects
January 2014	Consideration and refinement of pilot bids
February 2014 – June 2014	Pilots undertaken
14 July 2014	National symposium took place at the University of Warwick
August 2014 – October 2014	Collection and collation of pilot data
December 2014	Draft report completed

5. The pilot projects

Pilot projects A, B and F investigated the feasibility of using the CAAI-UK to target interventions in groups of students who had already been identified by other means, for example a course of study which was showing a lower level of graduate employment than the institutional average in the Destinations of Leavers in Higher Education (DLHE) survey.

Pilot project C investigated the possibility of using the CAAI-UK in an institutional context, for example to survey all of a first year cohort, and particularly investigated the institutional processes which might be involved in such an endeavour.

Pilot D explored the feasibility of producing an online version of the CAAI-UK and to what extent this might be perceived as useful by students and careers services.

Pilot E explored how the CAAI-UK might be used in conjunction with a work placement to help students to reflect on learning, career development and transitions between university and the world of work.

5.1 Pilot A

Thirty-five taught postgraduates, who were enrolled on the institution's extra-curricular employability award, completed the CAAI-UK at the beginning of the award. The sample comprised 52 per cent UK- domiciled students. Of the remaining students, most were non-EU domiciled, with a small proportion coming from the EU (nine per cent). There was also an approximate gender balance in the group with 46 per cent of the sample being male. Interestingly, the mean scores for this group were lower on all factors than was reported in the validation study, which used undergraduate students (see table 1 below). Exploration of this finding was not possible in the timespan of the pilot, but the need for further exploration has been highlighted. The finding does, however, highlight the danger in assuming linear development of the adapt-ability dimensions and directly correlated increases in scores, which are actually based on self-perceived ratings. These ratings may decrease initially as self- awareness increases, thus direct use of scores as a value added measure may produce misleading results in the short term. On the other hand, trend data over a number of years may well be of interest to institutions as it would show patterns in student perception which could perhaps inform career development planning.

Table 1 Numbers of individuals in low, middle & high ranges of scores and mean scores for each factor¹

Factor	Concern	Control	Curiosity	Confidence
Numbers of individuals who scored in the lower range of scores	10	25	13	21
Numbers of individuals who scored in the middle range of scores	24	10	21	14
Numbers of individuals who scored in the higher range of scores	1	0	1	0
Mean score (mean score in validation study in brackets)	16.91 (19.59)	15.40 (21.74)	15.86 (19.60)	15.11 (21.31)

¹ See Appendix 4 for score ranges

In addition, 30 students who were on a course which showed a lower level of graduate employability (as measured by destination data) than the institutional average completed the CAAI-UK at the beginning of the winter term. The responses to the questionnaires highlighted some students who could be in greater need as there were cases where some factors had a high score and others a low score. This exercise therefore helped to identify where students might need extra support.

Scoring the inventory manually was quite time consuming, but this was deemed to be acceptable provided numbers were manageable. It was also noted that patterns emerged quite quickly. It was concluded from this pilot that the inventory could be usefully used with smaller groups of students from previously targeted courses to identify specific need. Timing was also identified as being important, both in terms of student perception of relevance and appropriate timing of any resulting intervention. For the future it was suggested using the inventory at the end of the second year of study, with resulting targeted interventions in the autumn term of the final year.

5.2 Pilot B

Forty-three second year students from two tutorial groups were introduced to the pilot and to career adaptability. They were also emailed a reflective diary with a request that these be completed. A follow-up email and a prize draw opportunity followed in order to encourage completion.

The questionnaires were scored and entered into an Excel spreadsheet to create averages for the cohort. An email to each participant was composed, giving individual scores and comparisons with the cohort average. Some suggestions for further action, as well signposting to various events, were also included, based on scores for individual factors. This process proved to be very time consuming. See Figure 2 below for an example feedback email.

Figure 4 Example of a feedback email sent to participants

Dear XXXXX

Here are your career adapt-ability scores and a comparison with the other 42 second year students taking part in the project.

	TOTAL (max 120)	'Concern'	'Control'	'Curiosity'	'Confidence'
You	86	20	21	25	20
Group average	82	19	22	19	22
Range of scores	62-101	10-28	14-30	11-26	14-29

Comment: Overall, you've rated your career adapt-ability strengths above the average for this group. Your self-assessment is similar to others for 'Concern' and 'Control', and a bit lower for 'Confidence'.

You've rated yourself well above average for 'Curiosity' (the fifth highest score in the group). Curiosity is a very useful strength to have as it can open up all sorts of interesting career options and will help you find the career, employer and role that is right for you. And employers really like people who can show they are keen to learn new things – even within Finance! In fact, learning something new is a great way to build career confidence.

The next year will go by scarily quickly, you'll be far busier with assignments than this year and many employers start recruiting late Summer/early Autumn. So, I'd encourage you to take a few small extra steps now – perhaps by exploring some of the links and events below or deciding to get advice from a careers advisor. It may feel like a chore now but it is a much, much tougher option to leave things until after graduation.

I have attached another copy of the diary – perhaps thinking about these results could be one of your 6-8 entries?

Remember to complete 6-8 entries and return it to me by xxxx to go into the draw for Amazon vouchers – and to be contributing to this valuable piece of research.

Remember to check out events (www.xxx.ac.uk/employabilityevents):

- Including careers fair, visiting employer events, mock assessment centres, psychometric practice workshops

As I mentioned, please do look at Fronrunner opportunities (www.xxx.ac.uk/fronrunners):

- these are real, paid jobs at xxx for three, six or nine months to fit around your studies starting late August or September
- great experience of a real recruitment process
- there are workshops (via events above) to help with applications and interviews

Good luck!

The reflective diaries were not completed, perhaps due to other academic commitments which were due at the time, and so there was no data forthcoming to consider students' views on the usefulness of the intervention.

Benchmark data from the project team would have been useful early in the project as there were no benchmarks against which to compare participants' scores available at the time, and thus group averages were used of necessity. Automated scoring and some stock feedback suggestions based on some typical profiles would have reduced the time required for feedback.

5.3 Pilot C

This pilot was designed to explore the feasibility of using the CAAI as an institutional approach to 'distance travelled' for career and employability development at every year of study. Following a series of meetings, the institution's Director for Student Experience, School Deans and Head of Registry were all persuaded of the value of this core premise. The case included:

- the National Student Survey (NSS) specifically asks how well the programme of study has supported students' personal development and thus there is a need for the institution to know whether interventions are making any difference;
- the CAAI-UK is up to date, theoretically informed, and easy to use;
- within the institution, evaluation of personal and professional development tended to be piecemeal, thus making it difficult to obtain or report an overall picture of student development in the institution.

The pilot encountered difficulties at the information technology stage, with institutional staffing and operating platform issues meaning that the pilot was unable to be implemented within the life of this project. However, development of this is ongoing at the institution concerned, with a new and more significant focus for the application of CAAI-UK as the method of evaluation for a proposed student award with a significant career planning and employer engagement theme. The work undertaken during the pilot has provided the opening for this new route.

This pilot demonstrated that in this instance, career adapt-ability was an appropriate framework to unify discussions with academic and administrative colleagues and that it was feasible in principle to introduce this measure on an institution-wide basis.

5.4 Pilot D

This pilot was designed to explore the feasibility of putting the CAAI-UK online for use by students, graduates and careers services. As part of the design, the online pilot group renamed the scale, calling it the: “Getting ready for work questionnaire” See figure below for an example question page.

Figure 5 Screenshot of the first page of questions in the online scale

In the online version, as in manual scoring, all questions in the scale would need to be completed and the results summed in order to generate an ‘output’. As there were four factors and three scoring ranges (see Appendix 4) there were therefore 12 ‘outputs’ in total (see table below). Text was written and appeared for each of the 12 score ranges shown in the table below on completion of the CAAI-UK online. The overall adapt-ability total was presented as a score only. Text was aimed to stimulate appropriate action for someone with such a score (see Figure 4 below). The value of these text prompts were assessed during user testing.

Table 1: Outputs for CAAI-UK online

	Lower range	Middle range	Higher range
Concern	1.	2.	3.
Control	4.	5.	6.
Curiosity	7.	8.	9.
Confidence	10.	11.	12.
Adaptability			

Figure 6 Screenshot of an example text output for a middle range score on Concern

The screenshot shows the PROSPECTS website interface. At the top, there is a navigation bar with links for 'Jobs and work experience', 'Postgraduate study', 'Careers advice', and 'Job sectors'. A user is logged in as 'Hi Sam', with options to 'Go to your dashboard', 'Go to your career planner', and 'Log out'. A search bar is also present. The main content area is titled 'Getting ready for work questionnaire - Your score' and is associated with 'The Higher Education Academy'. It displays the following information:

- Concern**: You scored 76 - You are very typical - around 70% of people in our tests had a score like yours - read on...
You scored: 21
- Control**: **You scored: 18**

There are several links provided: 'Print your answers and results', 'Retake the questionnaire if you have developed your skills since your last go:', 'options with your subject', 'Form a plan', 'gain work experience', and 'Career Planner'. A list of advice points is provided for the 'Concern' score.

Students who used the CAAI-UK online were required to register with the hosting website and thus a mechanism to seek permission to pass on data to their university careers service was required. The establishment of a dataset to observe use of the scale was perceived to be important because it would not only help careers services to respond to individuals' needs but also enable the refinement of text in the outputs online.

On demonstration of the beta version of the online scale at the symposium in July 2014, there was significant interest in the online version from a number of HE institutions with a number of possible applications being mooted.

Within the life of the pilot, one cycle of user testing was undertaken whereby six individual students gave detailed feedback on their experience of using the beta version of the CAAI-UK online to test its usability, and 146 student users of the overall website were surveyed to test its perceived usefulness.

From the survey, 75 per cent of respondents found the scores from the CAAI-UK online useful to some extent and 83 per cent of respondents found the advice on what to do next useful to some extent.

However, during the initial usability testing by the individuals, a number of issues were found with the usability of the online questionnaire. Challenges in making the CAAI-UK online more usable related to the need to manage student expectations at the outset, amending the language used, and to make underlying concepts more readily understood. Some students struggled to explain their understanding of some parts of the CAAI – UK, but all but one did feel that the outputs had been useful.

A key question is whether the CAAI online should be used as a 'standalone' or whether it should be a moderated tool, used with individuals and in group sessions in universities. As a result of the limited application, described above, the consensus was that whilst it is likely to work best when moderated (and supported by guidance about the language or underlying concepts), there is unlikely to be sufficient resource within careers services to offer it to all students on a moderated basis ; thus, a focus on making it more

usable and useful via amendments and further testing if possible is needed if any institution were to wish to use it with all students. An online tool is also a more efficient way of using the CAAI in groups, in that scoring is automated reducing the time needed and the potential for human error.

5.5 Pilot E

This pilot involved a quantitative and a qualitative element whereby students were asked to complete the CAAI at intervals and the data was analysed. A small number of students from the quantitative sample were interviewed and the interview data analysed. The students were undertaking a work placement module, and the pilot was designed to explore whether career adapt-ability has the potential to enhance work placement learning.

5.5.1 Quantitative element

Sixty-seven undergraduates completed the CAAI-UK before starting a work placement module and 27 students completed it after the placement had been completed.

No significant difference was found in CAAI scores after placement for those who completed the questionnaire beforehand and those who did not, although the mean scores showed a tendency towards slight increases in confidence and thus in total career adapt-ability for those who completed the questionnaire before their placement as well as afterwards (see below for table). Neither was any significant difference found between the pre-placement CAAI scores & the post CAAI scores on all four factors or total adapt-ability for those who completed repeated measures, although the mean scores again indicated a possible tendency towards a small increase in all factors except control and therefore in total adapt-ability. This sample was also small due to practical difficulties in gathering repeated measures data (see below for table).

There were a wide spread of scores in all factors and in adapt-ability, which may suggest that tests using average scores may not be very helpful, and that targeting those with scores in particular ranges for particular factors may be more useful to the individual student in a real world setting.

Table 2 Mean scores after work placement for those who completed the CAAI-UK before and after placement and those who completed it only after placement.

Factor	Completed CAAI Pre & post placement (mean score)	Completed CAAI post placement only (mean score)
Concern	22.6	23.0
Control	22.5	23.5
Curiosity	21.6	21.3
Confidence	26.3	23.5
Adapt-ability	93.0	91.3

Table 3 Mean scores pre and post work placement for those who completed repeated measures

Factor	Mean score pre work placement	Mean score post placement
Concern	20.6	22.6
Control	22.6	22.4
Curiosity	20.3	21.6
Confidence	24.9	26.3
Adapt-ability	87.0	93.0

5.5.2 Qualitative element

Six students who volunteered were interviewed individually, three of whom had completed the questionnaire before and after placement and three of whom had completed it after the placement module only. Using the following definition of career adapt-ability: “The capability of an individual to make a series of successful transitions where the labour market, organisation of work and underlying occupational and organisational knowledge bases may all be subject to considerable change” (Bimrose et al, 2011, p.ii) as a starting point, interviewees were asked questions about their transition from university/part time work to work placement and their experiences on work placement.

Example questions included:

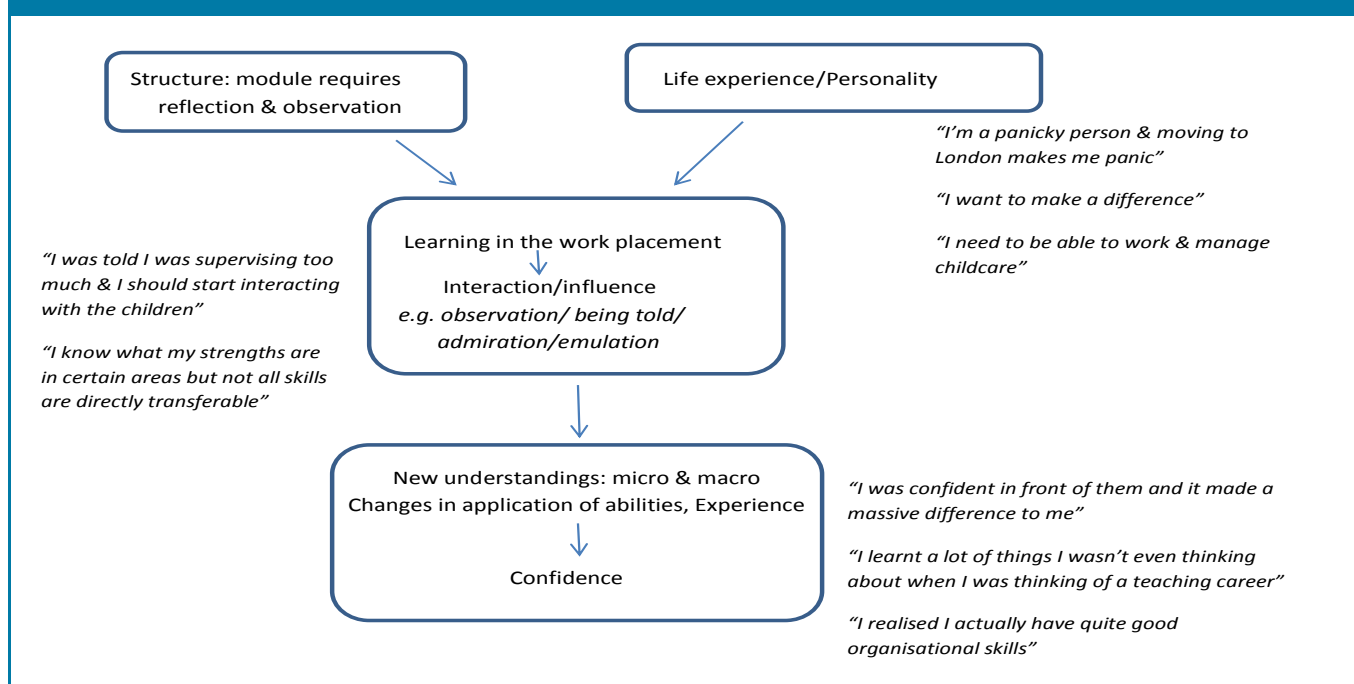
‘What sort of differences were there on work placement?’

‘How did you cope with these differences?’

‘What did you have to do to adapt the way you functioned?’

The interviews were recorded, transcribed and analysed for themes (Braun & Clarke, 2006) and the results are shown in Figure 6 below.

Figure 7 Analysis of interview data from Pilot E



The qualitative data show that career adapt-ability concepts as detailed in Section 2 of this report fit well onto participants' learning from their placement experience and to their experience of coping with transitions on placement. The particular finding that participants learnt from others about themselves, and about 'what better looks like' highlights the importance of "learning to adapt through interactions at work" (Brown et al, 2012, p 5). There seemed to be little difference again in perceptions or learning between those who had completed the CAAI before and after placement and those who completed it only afterwards.

The quantitative results in this pilot suggest that using the CAAI in bulk with large groups may not produce data which can be easily operationalised in the short term. However, using it to target those whose scores imply less ability to adapt may be more fruitful, and from this pilot overall it appeared that the CAAI may work well as a reflective tool which could be used in small groups, facilitating an individual's reflection on their learning after the event.

5.6 Pilot F

This pilot was designed to explore the potential of career adapt-ability to support returners to education. Participants were from a collaborative programme involving two years in a further education college plus two years at university, which attracts mainly mature students. It was decided that those making the transition from the FE setting to HE might be most inclined to engage and able to benefit. Thirteen students, based in community colleges, received a briefing explaining the concept and how to use the CAAI-UK and then completed the questionnaire.

These students were followed up after they had moved to the university. However, none of them responded to the opportunity to engage with the careers consultant who contacted them by both email and telephone. Once these students arrive at university they quickly disperse as they then link to the department in which they are studying, and meet infrequently as a group.

Table 4 Numbers of individuals in low, middle and high ranges of scores²

Factor	Concern	Control	Curiosity	Confidence
Numbers of individuals who scored in the lower range of scores	3	2	0	4
Numbers of individuals who scored in the middle range of scores	7	6	8	5
Numbers of individuals who scored in the higher range of scores	3	4	5	4
Mean scores (mean score in validation study in brackets)	20.53 (19.59)	23.23 (21.74)	23.00 (19.60)	20.69 (21.31)

Three and two students respectively scored in the lower range for concern and control, suggesting issues with indifference (Concern) or decisiveness (Control). Given the decision making and commitment these students have had to show as mature returners who are undertaking a four year degree, this might be viewed as surprising.

² See Appendix, section 9.4 for score ranges

A significant minority (four out of 13) scored in the lower range on the confidence factor, suggesting support for them could usefully focus on encouraging them to recall, recognise and articulate the value of their previous experience. This issue with confidence reinforces what careers professionals already know about some 'returners' who may wonder if they are good enough and have difficulty regarding themselves as academic. Such findings can usefully be fed back to course designers and deliverers to ensure this is addressed in a developmental way throughout the four years of their degree. Regular recognition of achievements by teachers, recording of and reflecting upon these achievements by learners and practice in their articulation are important if the above is to be addressed. It is interesting that by comparison with the postgraduate sample in Pilot A, these students scored very similarly to those in the validation sample. This perhaps suggests that career adapt-abilities may develop over the process of the degree; a suggestion supported in part by Tymon (2013) who suggests that communication skills and confidence may develop as part of undertaking a degree.

It would have been interesting to explore results individually with the sample group to establish the value they placed on these findings and how open they were to addressing some of the factors which might impact upon their career development, given the commitment they have made to higher education later in life, and this will be an option after the life of this pilot project. It had been hoped that the pilot would engage more students and it was expected that this group of students would want to engage with the potential support on offer. It may well be that these particular students, who were planning to make the transition to university, were preoccupied by more fundamental practicalities and were perhaps not ready to engage at a point where they may have considered career planning to be less relevant/too early.

Timing and staffing changes were both issues which inhibited this pilot as the careers consultant initially involved left the university in May 2014 and their successor was not known to the participants; there is a likelihood of this inhibiting the quality of follow-up contact. It is difficult to draw any meaningful inferences from the initial scores without having been able to engage in discussion either individually or collectively with these students.

6. Factors which impinged on pilot initiatives

Much learning about the integration of career adapt-abilities into practice has been derived from the six pilots, described above in Section 5. Of particular relevance to future practice is what can be learned about the barriers to successful implementation, so that thought can be given to overcoming these potential barriers. This section briefly outlines those factors that had an impact on the successful implementation of this concept into practice.

6.1 Factors which inhibited pilots

6.1.1 Timing

An extremely important issue when working with students in higher education concerns the academic timetable. The February to June 2014 time period for the pilots meant that once participating institutions had established their pilot, they were seeking to access students at what is traditionally a time when students tend to be working towards end of academic year assignments and examinations. These priorities will have inevitably impacted on any data collection involved in pilots sited within academic institutions.

Other timing issues may have involved the stage at which students were studying. For those students who were in their first, and perhaps second, year of study career related issues may not have been thought to be a priority.

The project experience demonstrates the difficulties which result when attempting to evaluate any change in practice over a short time period in higher education. A longer time period would have enabled the pilot sites to plan their workload and to accommodate the predictable waxing and waning of student engagement over the academic year.

6.1.2 Conceptual understanding and perceived relevance

User feedback for the online pilot suggested that for some students it was difficult to understand how the concepts involved in career adapt-ability were relevant to them and their future plans. It is possible that this was also an issue in other pilots.

This may relate to the underlying assumptions of individual students as they may initially assume they require a directive experience of careers guidance which will match them to an appropriate job (Inkson et al., 2014), rather than the acquisition of a set of psycho-social competencies which will enable them to adapt to the changing world of work as they progress through life (Savickas & Porfeli, 2012).

6.1.3. Institutional resources

The pilots relied on staff goodwill to undertake the work, as little additional resource was available. Whilst the list of interested parties compiled through dissemination of earlier research included both practitioners and service managers, it is notable that it was predominantly managers who were able to propose their participation in the pilots. These managers had then to identify and resource members of staff in student facing roles so they could become familiar with the concepts and the instrument and undertake the pilot. This inevitably took time.

Three of the pilot projects were negatively impacted by staff changes when key staff who were involved or responsible for pilot initiatives left the institution.

6.1.4. Practitioner resources

In places, the Steering Group may have underestimated the theoretical briefing and support required by staff undertaking the work of the pilots. For example Pilot B would have benefitted from earlier availability of the practitioner guidance documents (see below), and a number of practitioners would have welcomed more structured briefing on the concepts, had time allowed the timetabling of group briefing sessions.

6.2 Factors which supported pilots

6.2.1 Practitioner commitment

The Steering Group cannot overstate the value of the commitment, interest and enthusiasm of all the careers practitioners who gave their time to be involved in the pilots and the overall project.

6.2.2. Academic and administrative staff interest and commitment

In all the pilot sites the academic and professional staff involved did so enthusiastically and communicated that they valued the potential and the processes involved in the pilot projects. Similarly, the commitment and interest shown by Heads of Service and managers throughout the UK HE institutions facilitated both the pilots and the overall project.

7. Key project outcomes

7.1 Practitioner guidance

The experience of working with the pilot sites demonstrated to the project team the centrality of practitioners having a detailed grasp of the theoretical background in order to work with it effectively. Having conducted the validation study, the steering group had prior experience of working with the concepts, but practitioners were new to the material. Their enthusiasm for engaging with a new and seemingly relevant area of theory suggests awareness of its value, but many lacked the time to develop a deeper understanding. As such, written guidance notes were developed to support practitioners in incorporating the concepts into professional practice. These are available via the project site.

7.2 A framework for dialogue

Evidence is provided by these pilots of the potential for career adapt-ability to provide a useful basis for dialogue between different stakeholders across the sector. The example of Pilot C, where School deans and registry staff were both engaged with its use in terms of employability strategy, shows its appeal. As employability issues have risen up institutions' agendas, some practitioners' client-focused perspectives and institutional strategic concern for outputs and scalability have not always been easy bedfellows. The symposium event was a marked contrast where those working with students and those thinking institutionally, as well as those doing both, noted that they were engaged in conversation rather than speaking at cross purposes. This shows the great potential for career adapt-ability as a unifying concept for future career and employability developments.

7.3 Directions for further work

The pilot projects have also enabled us to identify particular challenges with integrating a theoretical framework of this nature within career development and employability practices. These include issues of appropriate timing for working with students, as well as time needed for practitioners to be supported in fully grasping material that is likely to be new to them and develop confidence with explaining the concepts and using the instrument with their clients. Student views of the value of career adapt-ability were not fully explored in these pilots. The pilots have led to the identification of factors which can be better addressed in further work. Our recommendation is that work continues, including:

- The development of further resources (such as online learning materials) to enable practitioners to develop a deeper understanding of career adapt-ability.
- Feedback from students on the use of the inventory
- Collection of trend score data over a number of years
- Further initiatives which explore the applicability of the inventory in the HE context, particularly its embedding within interventions such as award schemes, work related learning activities and programmes involving reflective practice.
- Exploration of the use of the concepts and the inventory with particular groups of service users such as research students and recent graduates.
- Further development and testing of an online version of the inventory

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9. Appendices



9.1 Terms of reference for Project Steering Group

Purpose:

The Steering Group provides advice and guidance to the project manager in the implementation of its pilot project that enhances and supports its capacity.

This pilot study seeks to examine the nature and extent of the impact of applying the CAAS on the career awareness, planning and decision making of students within a range of UK-wide universities

The study also seeks to identify the impact that such a tool will have on the ability of university careers services (and other guidance sector colleagues) to more effectively identify students in greatest 'need' so as to better allocate resources and provide the most effective interventions at an individual level.

Areas to be covered by individual pilot studies:

- Targeting careers guidance interventions
- Allocating resources to greatest effect
- Demonstrating careers guidance impact at individual and institutional level
- Encouraging students' reflective career development and effective action planning

The Steering Group provides a forum for informed discussion on the research pilot with particular emphasis on ensuring the integrated and timely roll out of the Project by 31 July 2014.

Membership:

The Steering Group comprises representatives from the University of Warwick, University of Birmingham, Newman University, the Higher Education Careers Services Unit and the HEA.

These group members bring experience and knowledge of their respective areas; access to major networks, capacity to influence and disseminate information and ability to comment on higher education policy, service development and collective career development expertise.

Meetings:

The Steering Group members will determine dates. It will meet at least three times in February, April and June 2014. It will exist for the life of the project.

Authority

The Steering Group reports to Toni Wright, as the Project Manager. The HEA authorises final versions of any reports and submissions that arise from this project.

A report on the findings of the project will be produced and will be published by HEA. Requests to disseminate and share any information prior to this should be directed to the project steering group.

Roles and responsibilities:

- Provide strategic direction and advice on issues and key themes emerging from implementation of CAAI-UK.
- Oversee project outputs, including the project report and end of project event.
- Monitor the implementation of the work plan and the development of strategies and tasks identified in the work plan.
- Debate, clarify, comment and make recommendations on draft policies and guidelines to reflect local needs.
- Identify overall implementation issues, risks and gaps likely to impact on the implementation of CAAI in the broader HEI context and work towards solution-based outcomes.
- Provide feedback and strategic advice on progress and milestones, issues resolution and policy directions to progress the implementation.
- To act as a problem-solving forum to address issues that may arise at either a policy or operational level.
- To identify strategies to mitigate emerging issues associated with implementation of the project.
- Monitor the financial management of the project, including allocation of resources, receiving bi-monthly financial updates.

9.2 Steering Group membership

Gill Frigerio, University of Warwick (Chair)
Anne Wilson, University of Warwick
Professor Jenny Bimrose, University of Warwick
Eluned Jones, University of Birmingham
Maureen Tibby, Higher Education Academy
Jane Artess, Higher Education Careers Services Unit
Dr Toni Wright, Newman University (Project Manager)

9.3 List of participating institutions/organisations hosting pilots:

Birmingham University
De Montfort University
Glasgow Caledonian University
Higher Education Careers Services Unit
Newman University
University of Warwick

9.4 Table showing scoring ranges, which were derived by taking one standard deviation either side of the mean of the validation sample to indicate the middle range

Factor	Mean score in validation study	Lower range	Middle range (Approx. 70 per cent of people score within this range)	Higher range
Concern	19.59	Below 15	24 - 15	Above 24
Control	21.74	Below 18	26 - 18	Above 26
Curiosity	19.60	Below 15	24 - 15	Above 24
Confidence	21.31	Below 17	25 - 17	Above 25
Adapt-ability	82.24	Below 70	95-70	Above 95

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