

# New DOTS: Career Learning for the Contemporary World

The DOTS analysis is a tool for reviewing and sharpening learning aims for careers education and guidance:

- decision learning (D);
- opportunity awareness (O);
- transition learning (T);
- self awareness (S).

It remains viable and influential. But it now needs to be extended to take account of on-going change and parallel developments in career theory.

This Briefing summarises new NICEC evidence-based theory, characterised as New DOTS. It sets out:

- how the DOTS analysis can be extended by mapping, not only what people learn, but how and why they learn;
- learning processes essential to learning-to-learn for life-long use;
- career learning for a changing range of work roles;
- how New DOTS can be used as an improved tool for designing and developing effective programmes.

The Briefing is written by Bill Law, Senior Fellow of NICEC. Its publication has been funded by the Essex Careers and Business Partnership.



The National Institute for Careers Education and Counselling is a network organisation initiated and supported by CRAC. It conducts applied research and development work related to guidance in educational institutions and in work and community settings. Its aim is to develop theory, inform policy and enhance practice through staff development, organisation development, curriculum development, consultancy and research.

## CRAC

The Careers Research and Advisory Centre is a registered educational charity and independent development agency founded in 1964. Its education and training programmes, publications and sponsored projects provide links between the worlds of education and employment. CRAC has sponsored NICEC since 1975.

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## CAREERS WORK IN A CHANGING WORLD

Contemporary career management must take account of global economic and technological change. But what people do about change is begun in families and neighbourhoods, among acquaintances, and on the basis of changing values and media images.

The dynamics are therefore changing both globally *and* locally. Government proposals for both Connexions and for Education for Citizenship acknowledge this, suggesting that:

- We must take account not only of the changing labour economy but of the strong and sometimes conflicting pressures in a person's early life, and the feelings and social attachments which they engender.
- We must see the learner in a social world, and set decisions and problems in that broader context, pointing in particular to the importance of values and responsibilities.

This has important implications for the future of careers education and guidance.

Late-20th-century careers education and guidance has been dominated by the ideas listed below on the left. The ideas on the right represent a broader and deeper understanding of how career development occurs, and the help that needs to be offered.

neutral information	→	critical understanding
key transitions	→	progressive learning
formally contracted work	→	breadth of working life
skills	→	feelings
individual choice	→	social participation
information about how things are	→	accounts of how things change

The economy is reducing demand for muscle and increasing the demand for thought. Education and training is, therefore, increasingly aimed at improving our ability to think *at* work.

But people need also to think *about* work, and this is what careers education and guidance is for. In this process, being able to link lists of opportunities to lists of skills and interests have been seen as important bases for choice. DOTS is good at categorising such lists.

But both the information and the categories change: new patterns of working life are constantly being formed, and some of the emerging forms are too fluid for ready-made systems of categorisation. Furthermore, the whole process of thought is infused with feelings, often with their origins in early life, and – just as often – expressed in peer and other social attachments.

This is not an argument for abandoning the systematic ordering of thought; it is an argument for extending it. New DOTS does so, with ideas about career as narrative – as a story.

Stories are useful for thinking about career, because they:

- set action in a social context;
- show the interdependence between roles;
- point to the different roles that any person occupies;
- identify the back-and-forth of influence between people;
- take account of point-of-view;
- infuse action and events with feelings;
- explain past causes of present action;
- anticipate how present action leads to future effects.

Most importantly, they:

- portray learning acquired over time, early learning preparing the ground for developed learning.

Stories frame, albeit in varying order, the questions we all ask of career:

where? what? when? who? how? why?

They can be told in shorter episodes or longer histories. They can also be told on a scale covering global and national events as well as local and personal ones.

The questions move from seeking information to seeking the kind of understanding which can explain past actions and anticipate the effects of future actions. The stages by which this occurs are set out in career-learning theory, and it is this which gives DOTS its new dimension.

The consequences of all this for careers education and guidance are far-reaching. But that term is not broad enough nor inclusive enough to represent what we now need to do. This Briefing therefore uses the term “careers work”.

## CAREER LEARNING

A career move needs to be sustainable. Career-learning theory seeks to explain how a sustainable basis for action is found. It sets out four stages of learning:

<i>Sensing</i> (Se):	getting a picture of the way things appear
<i>Sifting</i> (Si):	organising a version of the way things are
<i>Focusing</i> (F):	becoming alert to the way things feel
<i>Understanding</i> (U):	developing an account of the way things work

### SENSING

Sensing is a process of “finding enough to go on” – getting a picture of the way things now appear. It covers:

- inner learning – about self;
- outer learning – about the working world.

Working life now favours those who can find more (in both directions) than the familiar, the obvious, and the past. “Enough to go on” means enough to make change-of-mind possible.

But new information is often experienced as fluid and disconnected; it can feel confusing – even overwhelming. A more limited basis for action, in “what I’ve found so far”, can feel good because it puts an end to confusion. But it can also prove unsustainable – an impulse rather than a decision.

A longer and deeper thinking process is needed which moves from “enough to go on” to a sustainable basis for action.

### SIFTING

Sifting extends this process – developing a deeper sense of what is learned. It is an on-going process of background thinking:

- going over what is found – an inner conversation;
- making comparisons – finding the similarities and differences;
- establishing a basis for further communication with others.

Sifting puts information into useable order by creating categories and linking them into frameworks. Careers guidance relies on formal versions of such frameworks. These might, for example, make a link between “communication skills” needed for “work in health and hospitals”.

But informal social groups also create influential frameworks. “Men’s work” might be located in a person’s framework at a distance from “people like me”.

Furthermore, individuals form their own personal constructs. A framework might locate “what I like”, but that may or may not be similar to “people like me”.

Constructs, categories and frameworks make patterned sense of what would otherwise be a mish-mash. Sifting is therefore necessary – it makes a working version of how things are.

It can, however, be harmful, where, for example, information is arbitrarily framed – as it too easily can be along lines drawn by

class, race, gender, age and familiarity. The damage is increased where such thinking prompts premature action.

### FOCUSING

Focusing uses the framework as a basis for search, turning it into a mental map. The map locates how people, groups and events stand in relation to each other. A map is necessary when a person must get down to particulars – moving towards some possibilities, and avoiding others.

This allows me:

- to see how some things seem more likely or attractive to me than to other people;
- to envisage other things that I now want to probe – further learning I should pursue;
- to appreciate that this learning is a basis for possible movement – action.

In conversation with others, a person realises that his or her map is, in at least some respects, not like other people’s. This is what establishes the standpoint and provides for the development of that point-of-view.

But noticing such differences is often emotionally loaded, and can cause both internal and external conflict – needing time to resolve.

Nonetheless, realising that things feel as they do because of where I now stand is an important development of self awareness. I become an alert witness to my own life, able to locate myself on the map.

Focusing, then, assembles learning into a point of view, a distinctive inner life, and a basis for critical awareness.

### UNDERSTANDING

Understanding is the development of critical awareness:

- explaining the effects of past action;
- anticipating the consequences of new action;
- supporting an account of intended action – so that I can tell myself and other people what I am going to do, and why.

It means not taking things at face value but asking how they work – understanding causes and their effects. Questions may be along the lines “why do they do that?”, “why do I do this?”, and “what makes me want to do it so much?” – seeking past causes of present effects.

They may also be along the lines “how is this situation now going to develop?” and “what can happen if I do this now?” – imagining future effects of present causes.

There is, in real life, a rough-and-ready quality to such thinking; we are, after all, dealing with probabilities not certainties. But there are times when getting as clear as we can is an important way of knowing what the risks are and how we are going to deal with them. It can be the difference between making a sustainable career move and wandering up a blind alley.

## THE NEW DOTS MODEL

The Se-Si-F-U account of career is as much a story as a list: it sets a scene, and portrays encounters which are infused with feelings, and develops over time.

It describes the same events as DOTS: DOTS sets out what people learn; Se-Si-F-U how they learn it.

	O opportunity	S self	D decision	T transition
Se sensing				
Si sifting				
F focusing				
U understanding				

The resulting career-learning space is a more complete way than DOTS of understanding what happens. It offers more ways of characterising effective career management, and of knowing what can be done to enable it.

All of this is appropriate to contemporary conditions in three ways:

- it portrays learning to learn;
- it links learning stage to stage;
- it sets career in a deeper and wider context.

## LEARNING TO LEARN

A learning programme can be thought of in terms of information about “work”, “self” and so on – this is the coverage of *what* people learn. But learning is also expressed as “enquiring”, “adapting” and “experimenting” – the processes of *how* people learn. Coverage is usually expressed in nouns, process in verbs; the verbs are at least as important as the nouns. The D-O-T-S words are nouns; the Se-Si-F-U words are verbs.

In a fast-changing world, coverage quickly dates. But processes are timeless. Learning how to learn is an enduring advantage.

Each of the four key verbs in Se-Si-F-U represents a *repertoire* of ways to learn, covering other learning verbs:

<i>Sensing</i>	<i>Sifting</i>	<i>Focusing</i>	<i>Understanding</i>
finding out meeting noticing expressing etc.	comparing sorting out considering defining etc.	appreciating disclosing adapting highlighting etc.	explaining trialing convincing anticipating etc.

New DOTS, then, sets out learning processes which people need, and will continue to need, in a changing world.

## STAGE TO STAGE

The model sets out stepping stones to knowledge, each step making the next one possible. All complex and dynamic learning requires such progression. The management of career is now as complex and dynamic as anything that people need to learn.

Se-Si-F-U is a progression. Working back from the endpoint: *understanding* requires that a priority is brought into focus; *focus* requires that information is sifted into useful order; and *sifting* can be badly misleading without enough *sensing* to challenge existing assumptions.

Where the progression works well, later learning develops earlier learning – in what career-learning theory suggests is a “due process”.

Flexibility is important in the contemporary world, but change of-mind does not necessarily come from more information. Indeed, more information sometimes pushes people into impulse and inflexibility. Change-of-mind can mean – in due process – re-sifting and re-focusing, so that new learning becomes a basis for changed action.

## A DEEPER AND WIDER CONTEXT

This means seeing the links between work roles and other roles. Work is always influenced by, done for, and carried out with other people. A work role is interwoven with other role relationships – as partner, parent, consumer, citizen and volunteer.

Choices made in one role have consequences in others. This means that earning and spending, working and resting, loving and planning, achieving and enjoying, must all be seen as aspects of one life.

Contemporary life creates work in many different forms, many of them carried out from home. This trend make the links between work roles and other roles more visible to more people.

All of this calls for a broader and deeper conception of “careers work”, where learning for one role can be seen as linked to all – with wide-ranging and deeply-rooted life-role relevance.

New DOTS is useful in this respect: it can help learners to make sense of the length, breadth and depth of contemporary learning needs:

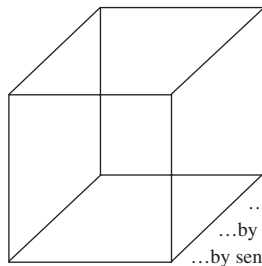
- coverage;
- process;
- *and* relevance.

**coverage – what to learn...**

...of opportunity ...of self  
...of decision ...of transition

**relevance – why learn...**

...as a worker  
...as a partner  
...as a consumer  
...as citizen  
...as volunteer



**process – how to learn...**

...by understanding  
...by focusing  
...by sifting  
...by sensing

It means that any combination of coverage and process can be applied to any life role. New DOTS is, then, as relevant to citizenship, personal social and health education and the ConneXions curriculum as it is to careers education.

## APPLYING NEW DOTS

### LEARNING IN PRIMARY SCHOOLS

Because later learning depends on early learning, career-learning theory has been developed for primary school teachers. It provides a framework for talking with and listening to children, following a visit. Teachers are asked to notice where in the framework pupils seem ready to talk about their experience. This suggests further learning they can then be helped to develop.

	Issues for "Work"	Issues for "Role"	Issues for "Self"
<b>Sensing</b>			
gathering information	was it noisy, friendly, or what?	who does what where?	what do I like best?
↓			
assembling impressions	what happens? and what happens then?	how do the people help each other?	how did I feel when I first saw this?
↓			
<b>Sifting</b>			
making comparisons	how are "manager" and "packer" different?	how many women and men in each position?	how did I feel as I was leaving?
↓			
recognising and using concepts	why is Errol called "a programmer"?	why doesn't the manager do some packing?	which work was hardest – how is it different?
↓			
<b>Focusing</b>			
dealing with points-of-view	does Susie really believe that Charlie's work is important?	why does Susie shout when I say van driving is men's work?	I wish I could stop Susie from punching me!
↓			
taking one's own view	what is the value of this product?	what do people feel about the packing department?	which work do I think is most useful – what is valuable?
↓			
<b>Understanding</b>			
developing explanations	what best explains the empty packing department?	why does Jane use a car and Errol a bike?	which work is best suited to me – and why?
↓			
anticipating consequences	will this work always be like this?	can the people do anything to improve things?	how can I improve my chances in work like this?

### DIAGNOSING LEARNING NEEDS

Learning needs are different in both coverage (DOTS) and process (Se-Si-F-U). The following items, addressed to learners by an adviser or teacher, diagnose where he or she is in the learning process.

	Importance?		
	Less		More
How important is it now that you learn how to...			
...find out more about work	1	2	3
...learn more about yourself	1	2	3
...get new work ideas	1	2	3
...meet new people – expand your horizons	1	2	3
total the ticked numbers here	<input type="checkbox"/>		
...compare what is available	1	2	3
...say how you are like, and not like, other people	1	2	3
...talk things over with a careers teacher or adviser	1	2	3
...see how working life is changing	1	2	3
total the ticked numbers here	<input type="checkbox"/>		
...work out who wants to influence you	1	2	3
...know whether to pay attention to them – or not	1	2	3
...say why things are important to you	1	2	3
...tell people your point-of-view	1	2	3
total the ticked numbers here	<input type="checkbox"/>		
...work out how things came to be the way they are	1	2	3
...explain why you let certain people influence you	1	2	3
...work out how what you do now can change things	1	2	3
...see more of what's coming into your life	1	2	3
total the ticked numbers here	<input type="checkbox"/>		

## THE CAREER-LEARNING NETWORK

The Career-Learning Network is an association of funders, developers and users of training and consultancy material for careers work. It aims to help keep the careers-work field in touch with contemporary developments in the working world and with useful emergent thinking.

Government help, through *Better Choices* and QCA publications, is not intended to provide sufficient bases for action. It cannot have the depth and range required by thoughtful and forward-thinking people in this field.

The Career-Learning Network therefore offers a flexible and responsive way for developing useful new ideas for action and for supporting their use.

### NEW-DOTS TRAINING AND CONSULTANCY MATERIAL

*Opening Doors – a Framework for Developing Career-Related Learning in Primary and Middle Schools.* Cambridge: Careers Research and Advisory Centre, 1999.

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*Rethinking Careers Work – a Practical Resource for New Action.* Winchester: Hampshire County Council, 1999.

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