The Learner at the Centre of educational design

Dr Richard Millwood
Trinity College Dublin

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Educational design is often, quite naturally, made to fit the organisational needs of the institutions and society providing education. This analysis is designed to support the designer in taking a learner-centred approach, echoing the work of Donald Norman in user centred design. By posing eight questions that we imagine a learner may need to answer in order to have a complete educational process, the design challenge can be broken down in order to identify where an educational design is at fault, which in turn acts a focus for creativity and development. This talk describes this analysis and explains each question's detail.

Educational Design

micro

Instructional Design - materials and activities to be used by a **teacher**

Learning Design - materials and activities to be used by a **learner**, perhaps through self-directed learning

Educational Design - systems for teachers, learners and institutions to provide a complete education

macro

Instructional Design

Robert M Gagné
Nine events

Steps of planning instruction

1. Identify the types of **learning outcomes**

2. Identify the **internal conditions or processes** the learner must have to achieve the outcomes

3. Identify the **external conditions or instruction** needed to achieve the outcomes

4. Specify the **learning context**

5. Record the **characteristics of the learners**

6. Select the **media** for instruction

7. Plan to **motivate** the learners

8. Test the instruction with learners in the form of **formative evaluation**

9. After the instruction has been used, **summative evaluation** is used to judge the effectiveness of the instruction

Instructional Design

Robert M Gagné
Nine events

Nine events of instruction:

1. Gain **attention**: Present stimulus to ensure reception of instruction.

2. Tell the learners the **learning objective**: What will the pupil gain from the instruction?

3. Stimulate recall of **prior learning**: Ask for recall of existing relevant knowledge.

4. Present the **stimulus**: Display the content.

5. Provide learning guidance

6. Elicit **performance**: Learners respond to demonstrate knowledge.

7. Provide **feedback**: Give informative feedback on the learner's performance.

8. **Assess** performance: More performance and more feedback, to reinforce information.

9. Enhance **retention and transfer** to other contexts

Instructional Design

Florida State
University
ADDIE

Analyze – gather of information about one's audience, the tasks to be completed, how the learners will view the content, define overall goals;

Design – informed by learning theories, explain how the learning will occur, tasks are broken down to be manageable, determine the activities required to meet the goals;

Develop – create and assemble the content and activities based on the design phase;

Implement – test all materials to determine if they are functional and appropriate for the intended audience

Evaluate – ensure the materials achieved the desired goals

en.wikipedia.org/wiki/ADDIE_Model

Instructional Design

John Keller
ARCS

Focus on motivation

Attention - create perceptual arousal or by inquiry arousal

Relevance - use language, analogies or stories to which the learner can relate

Confidence - help learners to believe that they can succeed

Satisfaction - make learners proud and satisfied of what they have achieved

elearningindustry.com/arcs-model-of-motivation

Me!

**My conclusions** as a curious designer / practitioner:

- The models presented are **too linear** in their approach, although in recent times they have been adapted

- They do not pay attention to **societal culture** and its goals, nor the problems of **assessment, examinations and qualifications**

- They do not discuss the **learning environment**, nor **the rôle of others** - peers, parents and teachers

Me!

My experience:

- Design works best when it is **iterative**, with **teams** including learners, teachers and experts who participate in a **design process**

- One of the most effective processes is Design Thinking:

dschool.stanford.edu

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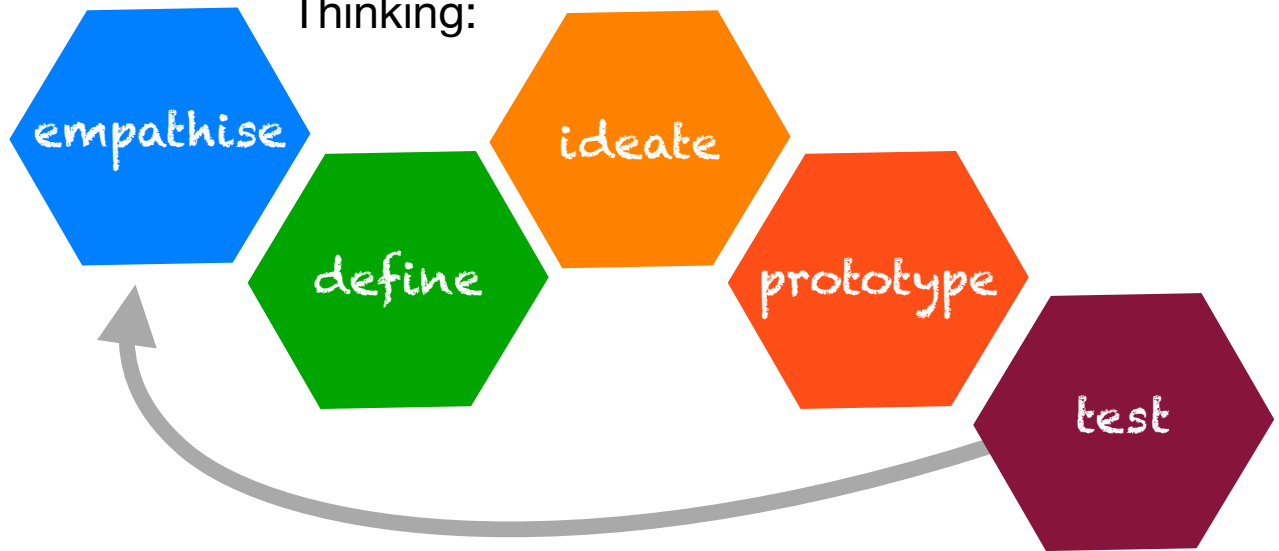
Me!

My thinking:

To more effectively make educational designs:

- We can learn from the computer software development concepts of **agile and lean development**

- We should see **educational design as a learning process** for the institution, designer, teacher and learner

- We need a more holistic analysis based on **multiple perspectives** including most importantly, the **learner-centred** point of view

"People today have a dizzying feeling of being torn between a globalization whose manifestations they can see and sometimes have to endure, and their search for **roots**, **reference points** and a sense of **belonging**."

- Jacques Delors 1996

"My roots are **England**, my reference point is **the Moon**, and my sense of belonging is in the **global society** of humankind…

…and I am a still learning."

- Richard Millwood 2017

Orientation - no longer centred on one country and nationalistic competition, belonging is now about making the globe work - all nations, all peoples. The view of the earth from the moon clarified that concept, but the attack on the World Trade Center on 9/11 showed the failure to achieve it.
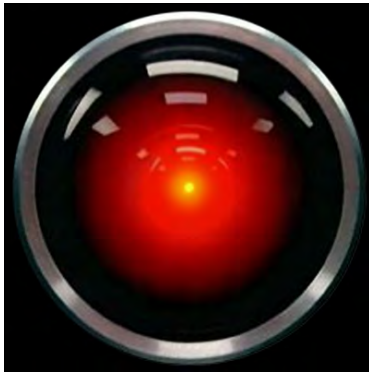
Perspectives

Technology & Environment

Regional & Global

Organisational & Social

The Learner at the Centre

networking

Moore's law

information processing

Technology & Environment

cost

multimedia & multimodal

www

communication

digital divide

buildings

classrooms

mobility

(Perspective of content, technologies, tools and infrastructure)

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World peace

Cultural enrichment

Wealth generation

Citizens

Regional & Global

BUT based on what's actually tested in examinations, society appears to need people who:		Work alone
		Use memory, don't search
Sit, still, in silence	Only write, with pen on paper	
		Forget!

Extract from Saturday Night Live's
Father Guido Sarducci
played by Don Novello
in 'Gilda Live!' (1980) Warner
Studios.

(Perspective of the government / society)

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Extract from Saturday Night Live's
Father Guido Sarducci
played by Don Novello
in 'Gilda Live!' (1980) Warner Studios.

I find that education, it don't matter where you go to school, Italy, America, Brazil, all are the same -- it's all this memorization and it don't matter how long you can remember anything just so you can parrot it back for the tests.

I got this idea for a school I would like to start, something called the Five Minute University. The idea is that in five minutes you learn what the average college graduate remembers five years after he or she is out of school.

It would cost like twenty dollars. That might seem like a lot of money, twenty dollars just for five minutes, but that's for like tuition, cap and gown rental, graduation picture, snacks, everything. Everything included.

You know, like in college you have to take a foreign language. Well, at the Five Minute University you can have your choice, any language you want you can take it. Say if you want to take Spanish, what I teach you is "¿Como está usted?" that means, "how are you", and the answer is "muy bien," means "very well." And believe me, if you took two years of college Spanish, five years after you are out of school "¿Como está usted?" and "muy bien" about all you're gonna remember.

So in my school that's all you learn. You see, you don't have to waste your time with conjugations and vocabulary, all that junk. You'll just forget it anyway, what's the difference.

Economics? "Supply and Demand." That's it. Business is, "you buy something, and you sell it for more." Theology, I'm gonna have a theology department, you know, since I'm a priest, and what you have to learn in theology is the answer to the question, "Where is God?", and the answer is, "God is everywhere." Why? "Because he likes you." That's kind of a combination of the Disney and Roman Catholic philosophy. It's just perfect for the late 70s or early 80s you know, just perfect.

Well, after the courses are all over, then it's time for a little Easter vacation. No time to go to Fort Lauderdale, only lasts for like twenty seconds. But what I'll do for you, I like to turn on the sun lamp you know, give you a little glass of orange juice, that's for the snack part, orange juice, and then after vacation it's time for the final exams. I say to you, "¿Como está usted?" you say "muy bien," "Where is God?" "God is everywhere," Economics, "supply and demand," then you put on a cap and a gown, I get out my Polaroid camera, you know, make a little snap flash picture for you, I give you the picture, you give me twenty dollars, I give you a diploma, and you're a college graduate, ready to go.

I'm not sure, but I'm pretty sure, right next door to the five minute university, I might open up a little law school. You got another minute?

Sustaining
the business

Maintaining
quality & standards

Defining the
curriculum

Transforming
organisational
culture

Developing the
staff

Relating to
government, private
and public sector

Balancing
pure & applied,
discipline & vocation

**Organisational
& Social**

Meeting the needs
of new millennium
learners

**(Perspective of the leader of
business, institution or community)**

"In sum, I believe that the individual who is to be educated is a social individual and that society is an organic union of individuals.

If we eliminate the social factor from the child we are left only with an abstraction;

if we eliminate the individual factor from society, we are left only with an inert and lifeless mass.

Education, therefore, must begin with a psychological insight into the child's capacities, interests, and habits.

John Dewey
from 'My Pedagogic Creed'
School Journal
vol. 54, pp. 77-80
(January 1897)

The Learner at the Centre

(Perspective of the lifelong learner)

3 Process
- skills
- creativity
- inquiry
- pedagogy
- technology tools
- mental-models
- facts
- memory
- intelligences
- bio-technology

4 Community
- teachers
- parents
- peers
- stakeholders
- costs & finance

5 Environment
- buildings & equipment
- internet
- mobility
- timetable
- lifelong
- access

6 Source
- authority
- multimodality
- user-generated
- intellectual-property
- universality
- global-local
- language & culture

2 Importance
- culture
- tradition
- discipline
- ethnicity
- society
- literacy

7 Assessment
- communication
- judgement
- planning
- progression
- continuity
- testing
- specialisation

1 Motivation
- fulfilment
- delight
- relevance
- curiosity
- economics
- expectation

8 Recognition
- reward
- accreditation
- standards
- qualification
- portfolio
- employment
- portability

Who can help me, and I them?

Where and when?

What resources can help?

How do I come to know?

What is there to be known?

What have I achieved and what next?

Why do I want to know and share?

How do I convince others?

The Learner at the Centre

responsibilities **rights**

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This slide shows "The Learner at the Centre" framework with various categories.

fulfilment	to satisfy life-goals
delight	to give pleasure through appreciation, interest, zest, conviviality, controversy and recognition
relevance	to find out about immediate concerns related to current life
curiosity	to satisfy an instinctive concern to know
economics	to improve income
expectation	to satisfy others' expectation of me

3 Process

skills
creativity
inquiry
pedagogy
technology tools
mental-models
facts
memory
intelligences
bio-technology

2 Importance

culture
tradition
discipline
ethnicity
society
literacy

1 Motivation

fulfilment
delight
relevance
curiosity
economics
expectation

4 Community

teachers
parents
peers
stakeholders
costs & finance

buildings & equipment
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lifelong
access

authority
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user-generated
intellectual-property
universality

8 Recognition

reward
accreditation
standards
qualification
portfolio
employment
portability

Why do I want to know and share?

How do I convince others?

The Learner at the Centre

responsibilities rights

delight

Appreciation	the love of aesthetic form	"The emotions of a fulfilled imaginal sensibility are of a range and subtlety that outstrip the power of language to symbolize them. Hence they are conveyed by the non-discursive symbolism of drawing, painting, sculpture, music and dance."
Interest	the love of knowledge	"When the need to understand is realized, we experience interest, extending into curiosity and fascination, the passion for truth, excitement in intellectual discovery, pleasure in the clear communication of ideas."
Zest	the love of action	"The emotions involved in the fulfilment of free choice and effective action" including "relish, gusto, exhilaration, achievement and work satisfaction."
Conviviality	the love of company	"The pursuit of 'co-happiness' & mutual fulfilment interpersonally & collaboratively, the pleasure of others' smiles, laughter and contentment."
Recognition	the love of achievement	"Personal, communal and societal celebration & valuation in achieving real outcomes, surpassing a goal and exceeding expectations."
Controversy	the love of dissent	"The rush of realisation that there is another view that may provoke personal enrichment and realignment."
Anticipation	the love of potential	"Envisioning future delight."
Resolution	the love of closure	"Deploying talents, solving the problem, conquering pain and completing the marathon, arriving at a milestone, finishing."

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Appreciation, Interest & Zest: Heron, J, 'Feeling and Personhood: Psychology in another key' London and Newbury Park, CA: Sage, 1992.
Conviviality, Recognition & Controversy: Millwood, R, personal communication 2007.
Anticipation & Resolution: New Zealand teachers, personal communication 2008.

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3 Process

4 Commu...

culture
tradition
discipline
ethnicity
society
literacy

2 Importance

How do
I come to
know?

What is there
to be
known?

culture	the artistic works of my regional or national group
tradition	rituals, values and morals
discipline	the content, methods, philosophy and terminology of an academic subject or profession
ethnicity	the languages, religions and celebrations of my people
society	the civic, governmental and judicial organisation of people
literacy	the means of listening, speaking, reading and writing to communicate, analyse and synthesise

1 Motivation

fulfilment
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expectation

Why do I want
to know and
share?

I convince
others?

8 Recognition

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**The Learner at
the Centre**

responsibilities rights

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3 Process

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2 Importance

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How do I come to know?

What is there to be known?

Why to k s

skills	memorising steps and practice
creativity	an open mind, contrariness, generation of alternatives and delay of criticism
inquiry	identifying questions, reviewing what's known, gathering evidence , analysis and conclusion
pedagogy	expressive constructivism: expressing ideas and evaluating if they are right
technology tools	delight, automation, multimodality, provisionality, constraint, neutrality, quality, record, logic and audience
mental-models	explaining and predicting based on identifying variables and relationships
facts	memorising names, connections, number bonds, spellings
memory	creating schemes to structure facts, rhymes and mnemonics
intelligences	utilising alternate modalities of thinking

responsibilities **rights**

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teachers
parents
peers
stakeholders
costs & finance

4 Community

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memory
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bio-technology

3 Process

buildings & equipment
internet
mobility
timetable
lifelong
access

5 Environment

authority
multimodality
user-generated
intellectual-property
universality
global-local
language & culture

6 Source

Who can
help me,
and I them?

Where and
when?

What
resources can

culture
tradition
discipline
ethnicity
society
literacy

2 Importance

1 Motivation

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the Centre

portability

responsibilities rights

teachers	authority, enthusiasm, pedagogy, motivation, curriculum, unconditional positive regard
parents	example, aspiration, encouragement, expectation
peers	teaching, discussing, sharing, collaborating
stakeholders	employers, volunteers, politicians
costs & finance	fees, grants, apprenticeship, internship

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2 Importance

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How do
I come to
know?

What is there
to be
known?

buildings & equipment	inside, layout, outside, home, museum, library
internet	search, feeds, social media, blog, wiki, content
mobility	mobile phone, laptop, wireless,
timetable	cohort, progression, continuity, curriculum, shared journey
lifelong	in work, leisure, continuing education
access	buildings, asynchronous

1 Motivation

fulfilment
delight
relevance
curiosity
economics
expectation

Why do I want
to know and
share?

The
the Centre

employment
portability

responsibilities rights

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skills
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3 Process

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2 Importance

How do
I come to
know?

What is there
to be
known?

authority	trust in validity, curation
multimodality	seeing, hearing, touching, moving
user-generated	authenticity, review
intellectual-property	copyright commons, fair use
universality	disabilities, differentiation
global-local	specific, generalised, localisation
language & culture	translatable, generic, specific

1 Motivation

fulfilment
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Why do I w
to know a
share?

responsibilities rights

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4 Community

5 Environment

6 Source

Who can

Where and

What
sources can
help?

communication	speaking, writing, performing
judgement	criteria, comparative, criticism
planning	maintaining records, analysing progress, next steps
progression	levels, spiral curriculum, increased challenge, formative feedback
continuity	avoiding conceptual gaps, building on foundations
testing	multiple choice, open questions, projects
specialisation	broad or narrow curriculum?

What have I
achieved
and what
next?

communication
judgement
planning
progression
continuity
testing
specialisation

7 Assessment

How do
convince
others?

8 Recognition

the Centre

economics
expectation

responsibilities rights

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buildings & equipment

reward	certificates, badges, prizes
accreditation	points, credits, accumulation, transferable
standards	national and international equivalence
qualification	for entry to profession, vocation
portfolio	collection, selection, presentation
employment	experience, practice, performance
portability	generalisability, acceptance, agreements between awarding authorities and governments

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4 Community

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2 Importance

What is there
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I convince
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8 Recognition

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1 Motivation

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**The Learner at
the Centre**

responsibilities rights

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2 Importance

Who can
help me,

Where and
when?

What

How do
I come to
know?

What is the
to be
known?

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7 Assessment

8 Recognition

1 Motivation

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responsibilities	What is my duty to be self reliant, work hard, be self-directing?
rights	What is my entitlement from friends, family, society?

responsibilities rights

Thank you for listening!

richard.millwood@tcd.ie

@richardmillwood

blog.richardmillwood.net

phd.richardmillwood.net

richardmillwood.net