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Digital Literacy - a driver for curriculum transformation

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Why focus on digital literacy?

European Union -

- Ensure European citizens do not feel left behind and marginalized by globalization and the digital revolution (2007)

Australian Government -

- Support all Australian students to embrace the digital age (2015)
- Increase the participation of all students and the wider community in ... STEM and improve their digital literacy (2016)



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Current situation

- Interest in STEM in secondary education declining
- 12 years for full impact of Digital Technologies curriculum
- Current digital literacy capabilities of secondary students below average and declining (PISA, NAPICT)
- “to enter the labour market of the future Australians will need to be literate, numerate and digitally literate ... threshold requirements of most jobs” (CSIRO)
- HE called upon to deliver work ready graduates
- HESF demands explicit definition of CLOs, effective scaffolding of learning

Digital Literacy - what is it?

Gilster (1997) - the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers

2017?

Dependent on ...

- Discipline
 - Context
 - Environment
 - Understanding ...
-
- Not static
 - Time consuming, frustrating, complicated



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Some recent thinking ...

<https://findingheroes.co.nz/2017/06/22/6-top-experts-expose-digital-literacy-mistakes-and-how-to-overcome-them/>

- Digital literacies are plural, context-dependent and socially negotiated (Doug Belshaw)
- Digital literacy cannot be clearly defined or assessed as it is not the same for everyone. However, it starts with foundational skills that provide access to infrastructure which are built on to have personal meaning and relevance. (Helen Beetham)
- Digital literacy is about *confidence* (Iain Maclaren)
- Digital literacy is about being able to critically reflect on why we use something rather than on using it properly (Maha Bali)
- We cannot ignore technology. It is the world we live in. (Michael Stephens)



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A common understanding ...

Digital Literacy is the ability to identify and use technology confidently and creatively, to effectively meet the demands and challenges of living, learning and working in a digital society.



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Digital literacy expectations

- Assumed knowledge? Not articulate (Coldwell, 2017)
- “Exposure does not equal understanding with regard to students’ daily interaction with digital technologies” (Murray and Pérez, 2014)
- “Widespread access to and use of computers ... does not result in students increasing their computer study options or their level of computer literacy, *rather the reverse is true*” (McLachlan et al, 2016)
- Students routinely significantly overestimate their capabilities (ECDL 2016, ...)
- Graduate outcomes (employer expectations)?

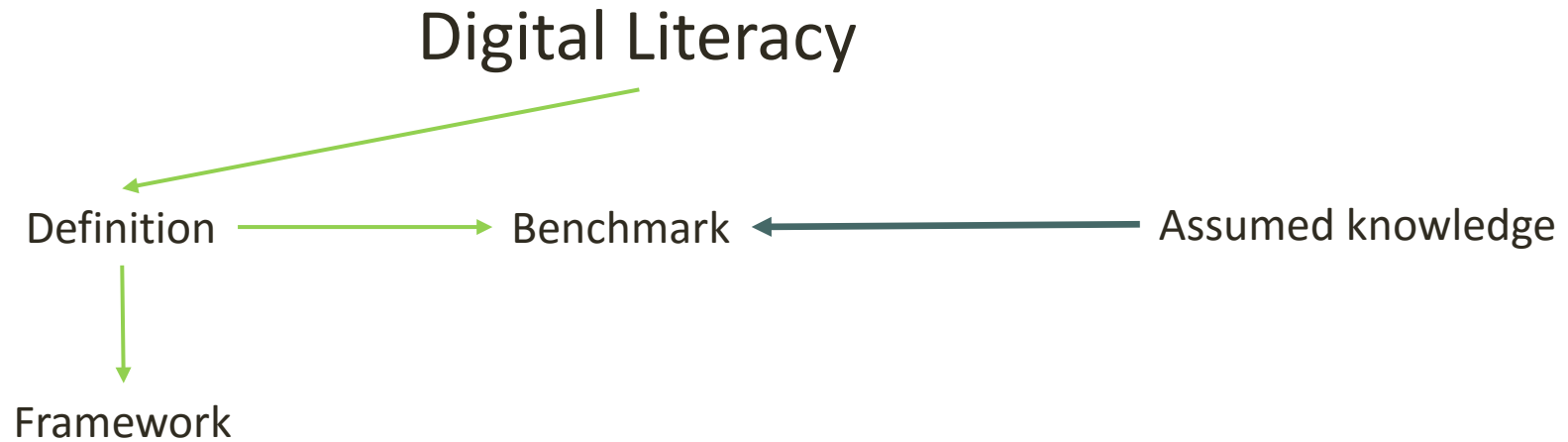


Frameworks and benchmarks

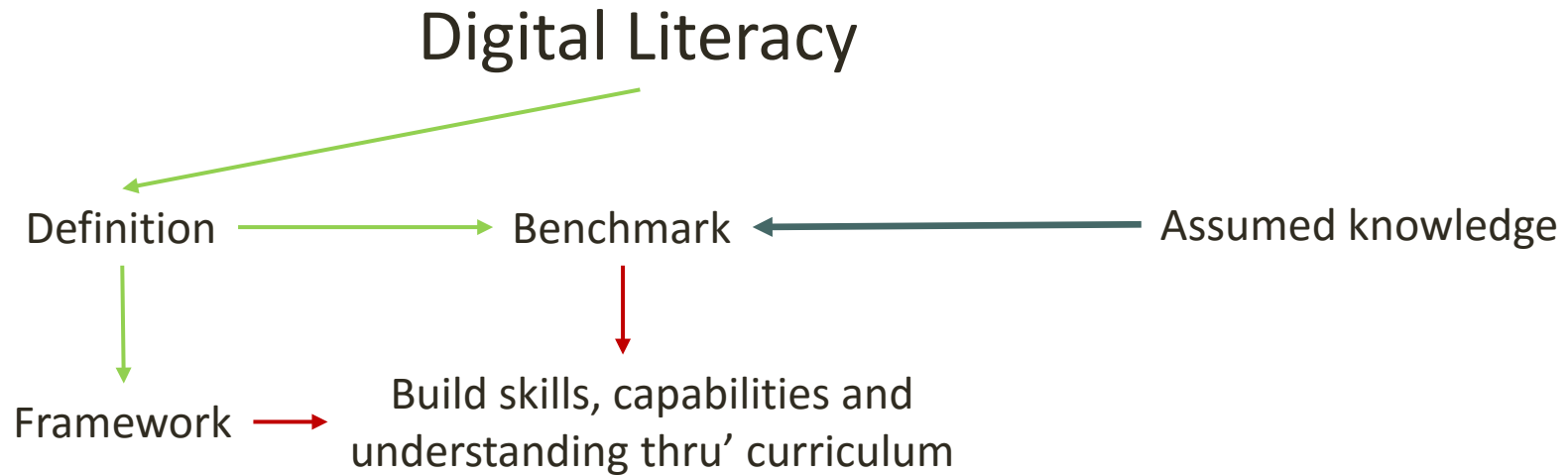
- Assumed knowledge benchmark?
- Common characteristics:
 - Have levels or dimensions of competencies
 - Are represented visually as a map for example
 - Include a range of literacies (information, media, communication, ICT etc.)
 - May be discipline specific in higher education context
 - Can be quite complex



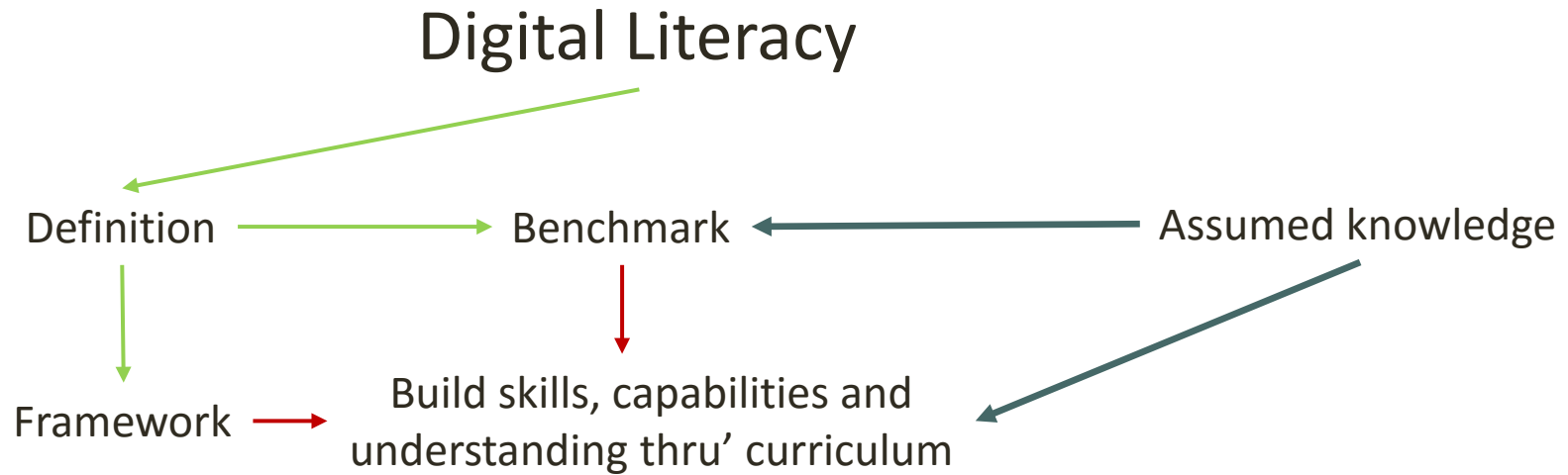
A transformation model



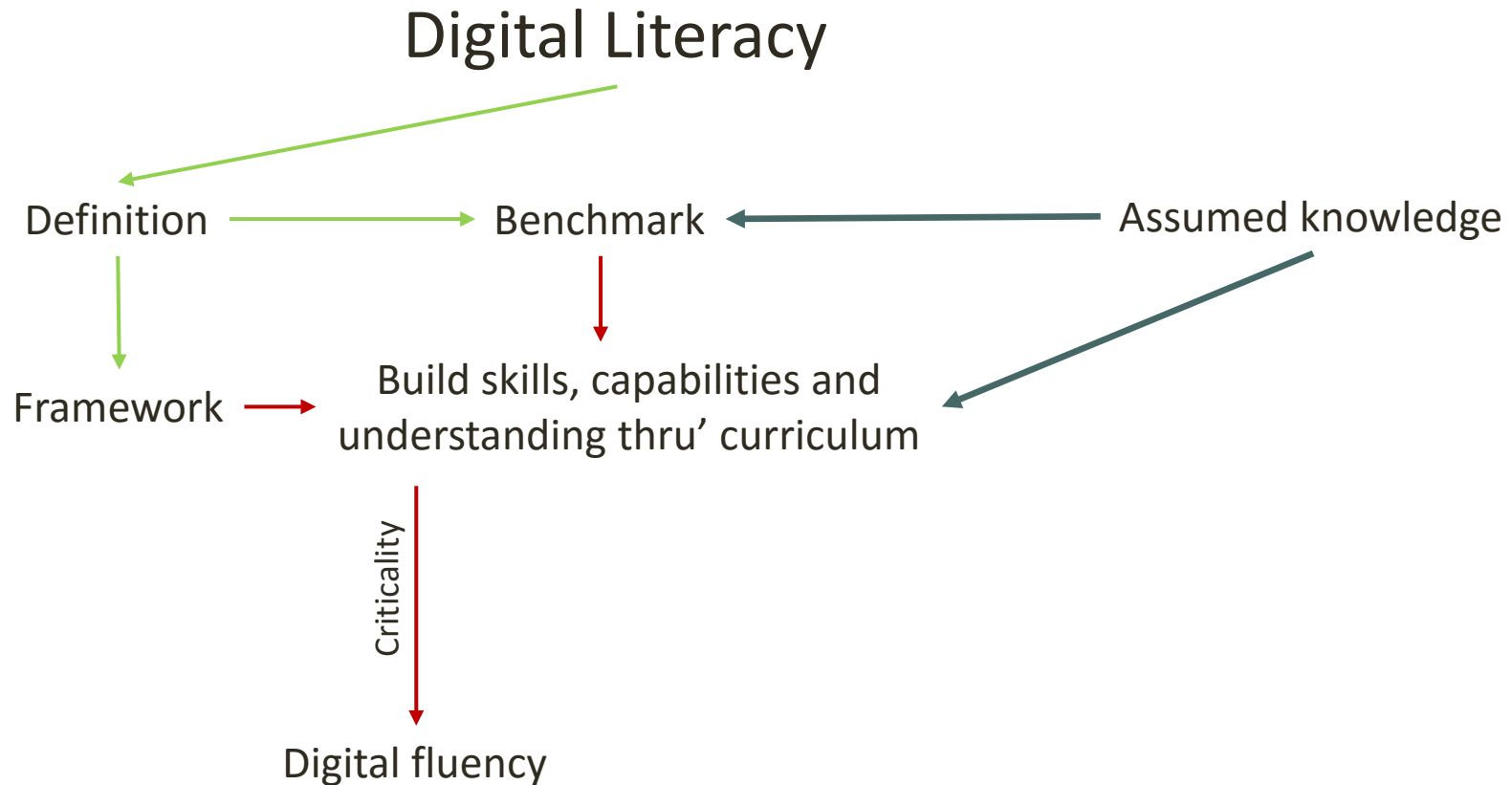
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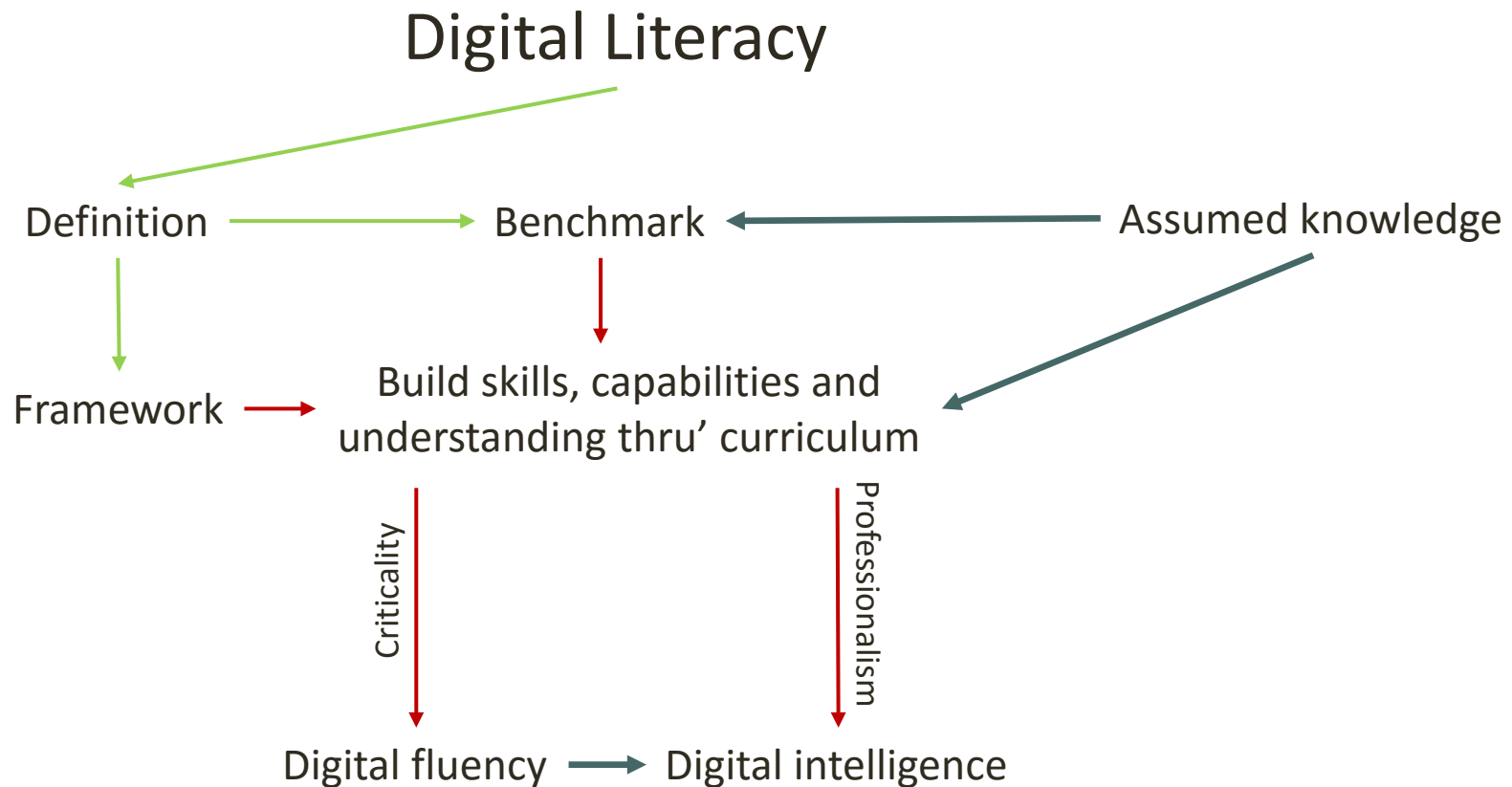
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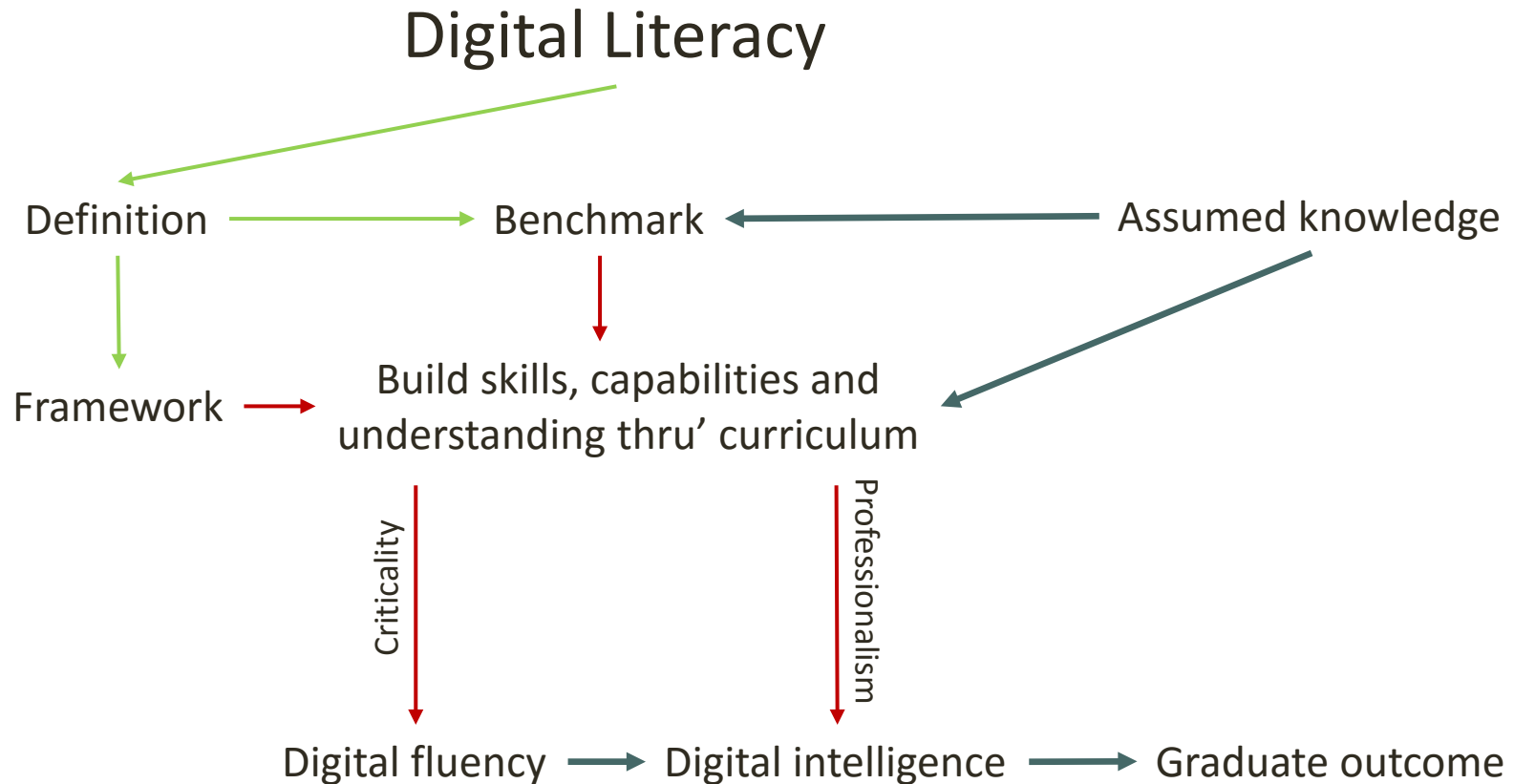
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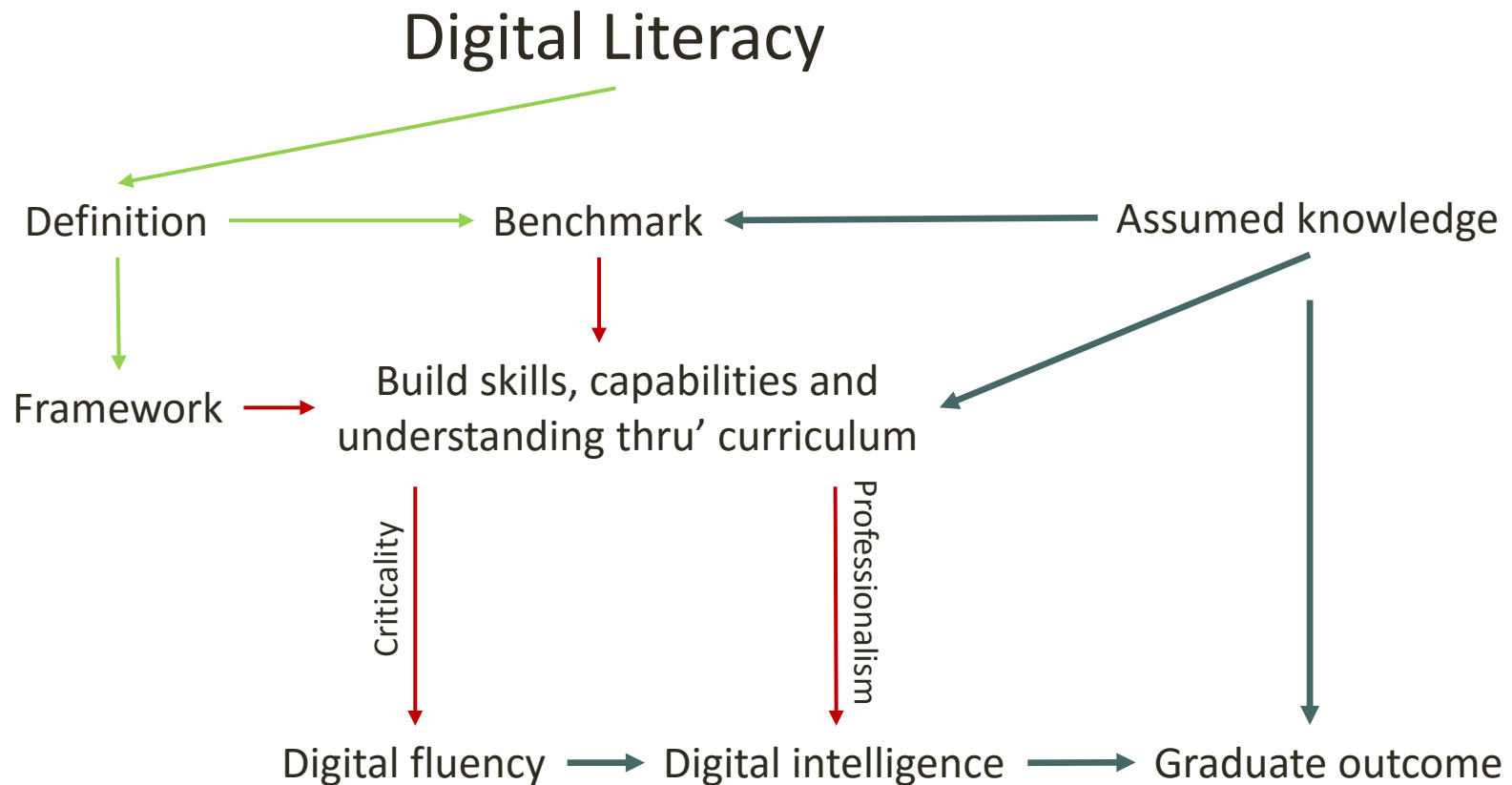
A transformation model



A transformation model



A transformation model



Conclusions

- OECD (2015)
 - ICT has revolutionised virtually every aspect of our life and work. Students unable to navigate through a complex digital landscape will no longer be able to participate fully in the economic, social and cultural life around them.
- NMC (2017)
 - [Higher education institutions are] charged with developing students' digital citizenship, ensuring mastery of responsible and appropriate technology use ... This new category of competence is affecting curriculum design, professional development ...

Quotable Quote : Kofi Annan

[digital] Literacy is ... a tool for daily life in modern society ...

For everyone, everywhere, *[digital]* literacy is, along with education in general, a basic human right ...

[digital] Literacy is, finally, the road to human progress and the means through which every man, woman and child can realize his or her full potential.

<http://www.goodreads.com/quotes/113611-literacy-is-a-bridge-from-misery-to-hope-it-is>

[...] added by Jo

