

# KNOWLEDGE VISUALISATION CHECKLIST

These are generic guidelines that need to be adapted and tested for specific contexts. Therefore, not all the criteria may apply in your context, the priorities (reflected in the allocated weights) may be different and moreover there may be additional criteria to consider. As a point of departure, we assume that this is to be used by lecturers who want students to use knowledge visualisation. In that case, the checklist would be shared and discussed but when marking the visualisation only the content will actually be graded. This improves evaluation efficiency while alerting the students to the fact that the format may subjectively influence their grades. These guidelines may be used and adapted for academic purposes, but we request that our foundational contribution is acknowledged in related publications. We welcome your feedback and we are willing to engage in adapting and evaluating these for a specific module, with the aim of providing evidence-based tuition and furthering research by publishing the findings in an accredited academic publication. Judy van Biljon (vbiljja@unisa.ac.za) and Karen Renaud (cyber4humans@gmail.com)

CONTENT		
Criteria	Guideline(s)	Weight
Effectiveness	Does it capture the essence of the knowledge to be shared (product or process)?	10
Overview and detail	Does it present the knowledge on different levels of detail? Concepts of a layer - similar in nature and granularity, supported by colour and font size.	5
Accessibility	Is it appropriate for the target audience's domain?	5
	Is it appropriate for the target audience's prior knowledge of the subject area?	5
Completeness	Does it represent all the relevant elements (could be components of processes)?	5
Parsimony	Are the concepts presented without redundancy?	5
	Are the concepts presented without decoration, i.e. are all the graphical elements functional?	5
Clarity	Is the visualisation without ambiguity?	5
Connectedness	Are the relationship between concepts clearly shown?	5
<b>Subtotal</b>		<b>Mark out of 50</b>
<i>Note: There are trade-offs involved which could make the guidelines seem contradictory. For example, visualisations essentially balance comprehensiveness and parsimony. This challenge that is sometimes solved by using multiple visualisations of different levels of detail.</i>		
FORMAT		
Criteria	Guideline(s)	
Natural Representation	Are the visual images based on recognisable or familiar portrayals?	5
Focus and balance	Are the visualisation elements distributed to use the space optimally? Are the elements positioned to support the visual prominence of specific elements and the direction of the information flow (if relevant)?	5
Symmetry	Is the visualization as symmetrical as possible?	5
Boundaries	Are the boundaries clear?	5
Consistency	Are visual elements such as colour, symbols, shapes etc. used consistently?	5
Simplicity	Is the number of concepts on each level of visualisation a maximum of $7 \pm 2$ objects	5
Legend	Is there an accompanying item to provide detailed explanations on the symbols used?	5
Dual coding	Are both textual and visual representations used to present the knowledge?	5
Colours	Are colours used to support the relating and differentiation of images?	5
	Are colours used aesthetically? Context will prescribe -since different colours have different meanings in different contexts and cultures. Also, consider colour-blind viewers, i.e. don't use red on green or variations of red to depict levels of importance and avoid red on a black background.	5
<b>Subtotal</b>		<b>Mark out of 50</b>
		<b>Total</b>

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# Dyslexia Friendly

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