

Hoe ontwerp je eigentijds beroepsonderwijs?

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Advies op Taakselectie in Zelfgestuurd Onderwijs

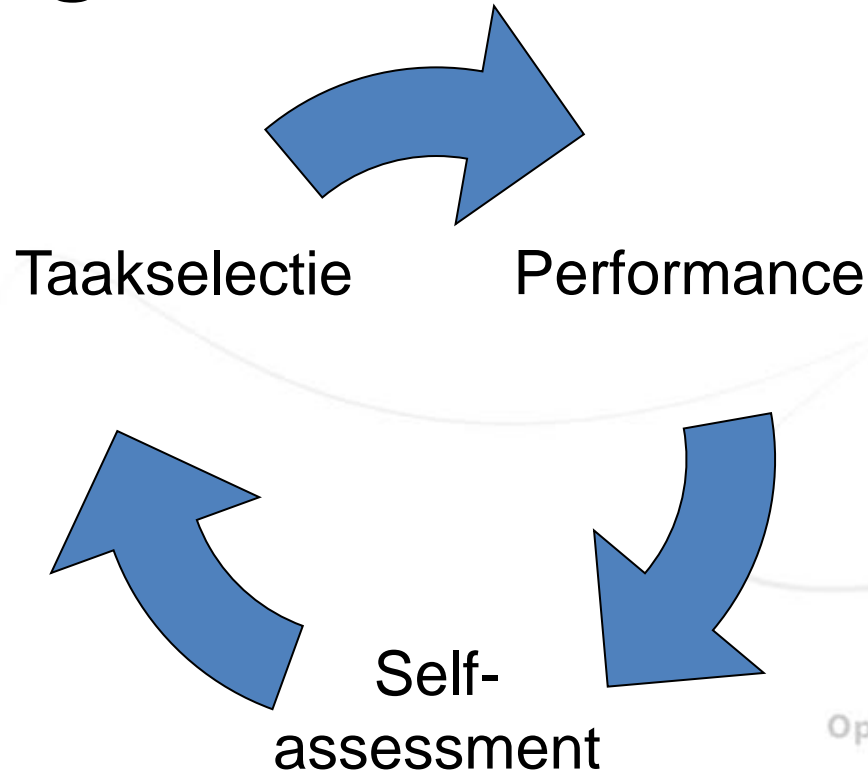
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¹Centre for Learning Sciences and Technologies, Open Universiteit

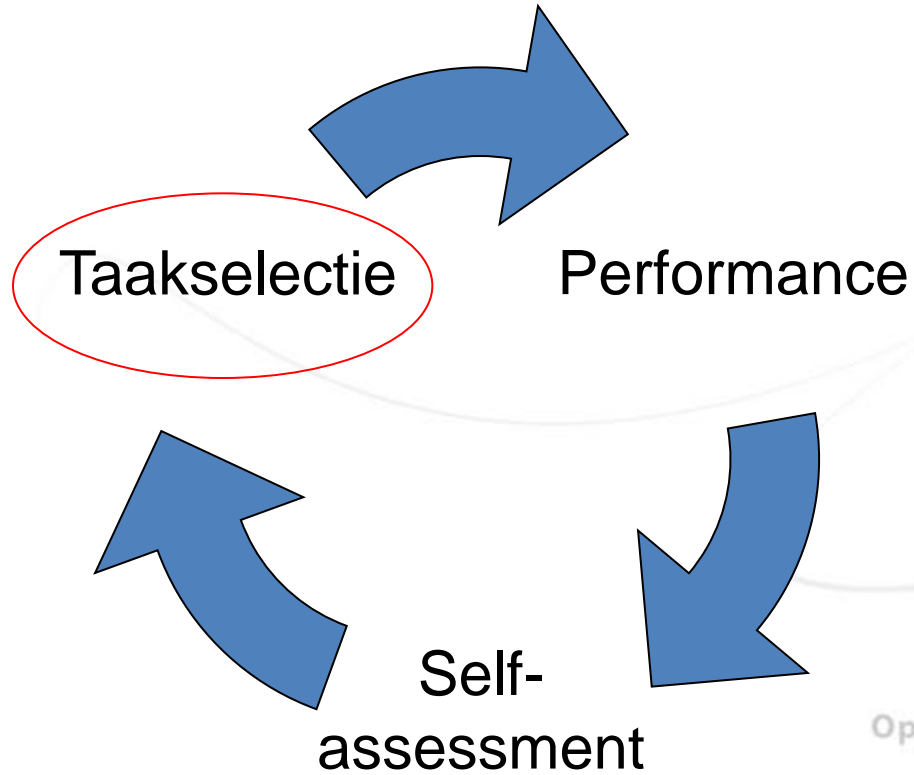
²School of Health Professions Education, Maastricht University



Zelfgestuurd onderwijs



Zelfgestuurd onderwijs niet effectief



Taakselectieproces

Relevante taakselectie aspecten:

- Difficulty level en support level vorige taak
- Kwaliteit Performance (Self-assessment)
- Mental-effort investering



Taakselectie-advies

- Lijst met relevante taakselectie aspecten
- Combineren van aspecten
- Aanbeveling van difficulty and support level passend bij combinatie aspecten



Hypothese

Leerlingen die taakselectie-advies ontvangen zullen meer domein-specifieke vaardigheden ontwikkelen en beter presteren in de testfase dan leerlingen zonder dit advies.

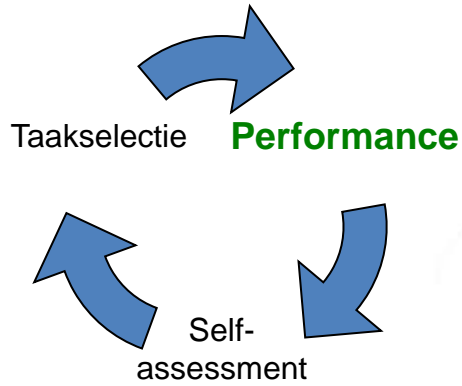


Experiment

- 30 studenten Bedrijfskunde
- Twee condities:
 - Zonder taakselectie-advies ($n = 15$)
 - Met taakselectie-advies ($n = 15$)



Performance



General information: Task introduction Task aspects Learning environment Performance standards

Legend System Dynamics Elements

Pipe fitting	Stock	Main Flow	Inflow	Outflow

You can drag the elements of the legend to the cells and drop them in any cell you want. The cells can also be used for labelling by clicking on a cell, a pop-up appears to write in.

Build the System Dynamics Model and label the elements

inflow = 30 festival posters each hour and from the 9th hour on 25 festival posters each hour

Stock = the festival posters total number being printed of posters printed for the festival, at the start there are 100 festival posters

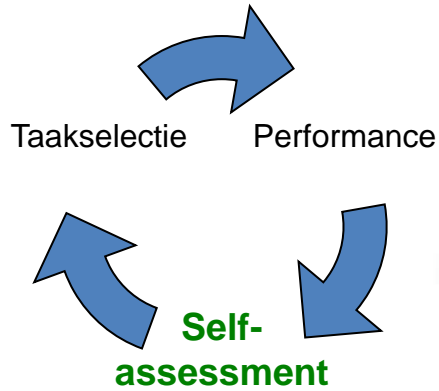
You can remove an element by dragging another element on top of it, or click on it to overwrite it with an empty label.

Case description
A few men have to sweep the streets. Already 10 m² is swept by them. These men sweep 7 m² each minute. After a while they get tired and look at each other and decide to sweep slower. Consequently, from the 12th minute onwards they sweep only 4 m² each minute.

System dynamics model

Graphs

Self-assessment



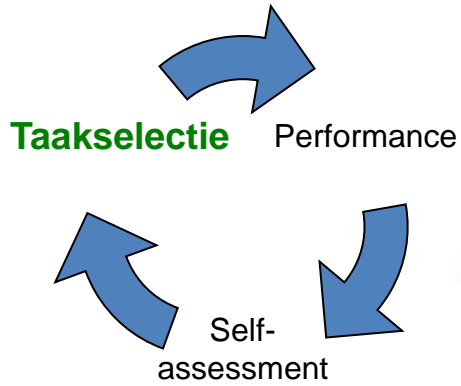
Assessment:

Assess your performance on the task filling in the rating scale:

- bad poor neither poor, nor satisfactory satisfactory good



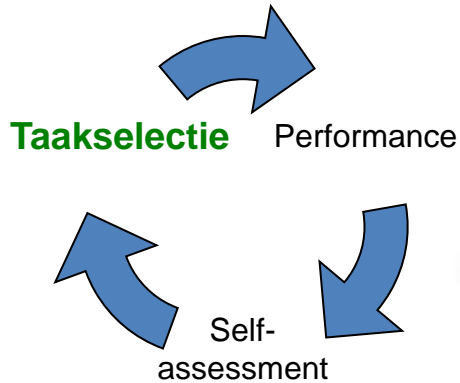
Taakselectie



Difficulty level	Easy			Moderate			Difficult		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
Tasks with a different coverstory	1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Taakselectie met Advies



Advice

Difficulty level of the last task = Difficulty level 1 (easy)

Support level of the last task = support level 3 (low)

Your Self-assessment score = satisfactory

Your mental-effort invested = low

You are advised to select an equally difficult task with one lower level of support.

Difficulty level	Easy			Moderate			Difficult		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
Tasks with a different coverstory	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	2	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	3	4	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	1	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	



Testfase

- Multiple-choice vragenlijst: testen van basiskennis
- Retentietest: 2 testtaken
 - ‘Model’-opdracht
 - ‘Tabel’-opdracht
 - ‘Grafiek’-opdracht



Results

Testfase:

- evenveel basiskennis vergaard
- Retentietest: 'Model'- en 'Grafiek'-opdrachten
verschil tussen condities in preseteren:
zonder advies > met advies



Conclusie

Dit type advies helpt leerlingen niet diepgaand begrip op te doen, maar belemmert hen daarbij.



Discussie

- Rechttoe rechtaan advies
- Geeft teveel richting
- Betrekt ze niet bij het combineren van aspecten en relateren aan geschikte taken
- Worden niet aangezet tot denken

