



Desired Learning Outcomes: Benefits & Pitfalls

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Why we need learning outcomes?

- Students know better what to expect to learn
- Teachers know better what they should teach

Higher Education & the Bologna Process (started 1999)

Requirements for creating an European Higher Education area:

- Mobility
- Comparability
- Measurability
- Comprehensibility



→ Need to know better what is being taught & learnt

→ The concept of LEARNING OUTCOME was "found again"



Learning outcomes - According to the Tuning-project:

Learning Outcomes are “statements of what a learner is expected to know, understand and be able to demonstrate after completion of a learning experience”.

Learning outcomes are expressed in terms of the level of competence to be obtained by the learner. Competences represent a dynamic combination of cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, and ethical values.

Reference:

Gonzalez, J., & Wagenaar, R. (Eds.). (2008, page 9). Universities' contribution to the Bologna process. An introduction (2nd ed.). Bilbao: Tuning Educational Structures in Europe.

BUT:

- **Is that all we get with learning outcomes?**
- **Any unexpected effects?**

Some central problems:

1) If we state today what an university graduate should know after completing a degree, are those goals anymore valid after 3 or 5 years when the students graduates?

2) Can we explicate desired learning outcomes so well that those really describe the kind of excellence that we aim at?

→ Some teachers experience LO's too narrow

→ Too narrowly described LO's can hinder the kind of wide scope knowledge that is needed to solve complex problems



Part of the problem lies in Behaviourist (1960's) epistemology:

The original meaning of LO's was to **clearly state the desired learning outcomes** and then **observe if these are obtained**. In behaviourism, the functions of mind and thinking were thought to be so hard to study that they were not included in research. Only observable behaviour was counted.

Mind as a "mental filing cabinet" (Bereiter & Scardamalia, 1998) – knowledge can be divided in small pieces and reorganised if needed

Today learning is understood as a complex development of expertise, not just as being able to repeat some actions or knowledge learnt by heart.

Reference:

Murtonen, M., Gruber, H., & Lehtinen, E. (2017). The return of behaviourist epistemology: A review of learning outcomes studies. *Educational Research Review*, 22, 114-128.



Study (open access):

Murtonen, M., Gruber, H., & Lehtinen, E. (2017). The return of behaviourist epistemology: A review of learning outcomes studies. *Educational Research Review*, 22, 114-128.

We looked at scientific articles and how learning outcomes are used:

Of 90 selected articles, 29% referred uncritically to behaviourist literature and only 8% critically.

Behaviourist epistemology (e.g. advise to use verb lists) was expressed by 11% of the papers without reference to behaviourist epistemology.

Adding uncritical and expressions of behaviourist epistemology we end up with 40% of scientific articles being uncritical towards learning outcomes. (52% of articles just used the term LO without explaining it or using it for their own purposes)

Conclusions

- **Since scientific articles contain uncritical ideas about learning outcomes (created by the time of behaviourism), it is probable that also other materials contain those.**
- **We should be better aware about the historical roots of these types of concepts to be able to predict the possible consequences.**
- **LO's have many positive sides, but making it too simple may have opposite effects.**
- **We should trust teachers' pedagogical expertise in defining learning outcomes, not to e.g. give them ready made verb lists.**

Thank you!

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