To know what not to do: Negative knowledge as a promising perspective for research on learning and performance in workplace contexts

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What is negative knowledge?
Negative knowledge is knowledge about:
• what something is not.
• how something does not work.
• inappropriate strategies to solve a given problem.

Existing theorization (Minsky, 1994; Oser & Spychiger, 2005; Parviainen & Eriksson, 2006) sees personal or narrated episodic experience as the primary origin of negative knowledge. An especially important role for building up negative knowledge play critical experiences (e.g. failures, conflicts) and their reflective analysis.

What makes negative knowledge a promising concept for research on work related learning and performance?
Existing theoretical accounts have described negative knowledge as a collection of mental „warning signs“. In that, different effects that seem advantageous in workplace contexts are plausible:
• As lessons being learned from previous critical experiences, negative knowledge should increase the chance of a future avoidance of such experiences by allowing an identification of their leading signs.
• In that, it should increase efficiency on the level of performance as well as certainty on the level of individual self-perception while performing.

An example
In a Nepalese hospital, a local doctor introduces visiting physicians by confronting them with “Seven easy ways to kill a newborn infant (Without even trying)”, these ways being e.g. “Don’t monitor vital signs”, “Feed infants with buffalo milk”, “Keep newborn infants with other patients who have contagious illnesses or draining wounds” or “Don’t wash your hands prior to examining infants” (Oser & Spychiger, 2005, p. 66).

An interview study
In the context of a qualitative study, the prompting task technique (PTT) was applied among N = 38 nurses of a residential home for the elder. Subjects were shown 20 nursing diagnoses (e.g., dementia, deficit of activity, parental role conflict) and were asked two questions:

What do you think one should pay special attention to in interaction with elderly people with the following diagnosis? What should be avoided?

Pre-study interviews showed that the direct question about what to avoid in a certain situation often was experienced odd and difficult to answer. Through the combination with a more general question, these difficulties could largely be overcome.

Basic forms of negative knowledge in nursing could be extracted from the interviews:

1. Nursing perspective:
   A. Knowledge about what not to do for nursing reasons (e.g. “...don’t expose the resident to excessive demands, but also don’t stop challenging him.”)
   B. Knowledge about a lack of consciousness of the resident (e.g. “...some-times the resident doesn’t recognize that what he does is harmful for him.”)
   C. Knowledge about what the resident cannot utter (e.g. “For many inhabitants, death is a topic that they think about a lot, but are not easily able to talk about.”)

2. Medical perspective
   A. Knowledge about what not to do for medical reasons (e.g. “…I pay attention that they don’t get into hypoglycaemia during the night, that’s a dangerous thing”)
   B. Knowledge about typical diagnosis mistakes (e.g., “These diagnoses are confused very often, but they are totally different things”)
   C. Knowledge about wrong generalizations of diagnoses (e.g. “No two dementia-patients are the same. You cannot answer that on such a general level.”)

3. Own professional role
   A. Knowledge about what not to do for personal reasons (e.g “Don’t let the relationship get too personal. You may take their problems home with you.”)
   B. Knowledge about limitations of competence or responsibility (e.g. “You cannot do more for the inhabitant. The best thing is to draw in a physiotherapist.”)

Conclusion and discussion
The listed categories not only contain negative knowledge about what the nurses themselves must not do, but also about what the inhabitants of the institution are not able to do or are not aware of. Apart from indicating the importance of the nurses adopting their clients’ perspectives, this shows the crucial role that negative knowledge plays for achieving this task.

Furthermore, some of the listed utterings of negative knowledge touch conflict-areas of the subjects’ work and professional role (E.g., autonomy of the inhabitant vs. medical or nursing recommendations). This partly confirms the above mentioned assumption that experiencing critical situations fosters the establishment of negative knowledge. Further research should consider the value of the concept for uncovering areas at the workplace, which are experienced being sensible or problematic for some reason.

In principle, the applied methodology seems appropriate for measuring negative knowledge. Yet, a shortcoming of the PTT is that it doesn’t allow for an interviewer to ask questions beyond the ones that are prompted. Therefore, the reported study yields a rather broad picture of different forms of negative knowledge. In order to deepen the understanding of how single facets of negative knowledge are acquired and applied, semi-structured interviews, maybe focusing on critical incidents in a professional context, could be promising starting points.

References:

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