Competence Vector

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Abstract

Competence, nonetheless abstract, can be described by a magnitude and direction like physical quantities. This ostensible qualitative measure is now being explained and measured in quantitative terms. The researchers envisaged a novel representation of competence as a vector. This competence vector is a resultant of three component vectors i.e. the competence of person, institution and peers. So far these three components have not been put together in a systematic way or at least have not been reported. It is concluded that competence could be represented with a vector in three dimensional space. Furthermore, this space could be extended to infinite number of components like any physical quantity.

1. Introduction

Competence, nonetheless abstract, can be described by a magnitude and direction like physical quantities. This ostensible qualitative measure is now being explained and measured in quantitative terms. Ordinal scale sufficiently describes its magnitude. The direction of this competence vector is defined only when it is operational. It changes with time and situation, but is observable only when it is operative.

Oxford Advanced Learner's Dictionary (2007) defines *competence* as the *ability to do something well*, or *a skill that you need in a particular job or for a particular task*. The concept of *competence* is used extensively in the context of 'human resources'. This, generally, refers to what determines the worth of people in their working environment (in the use of relevant knowledge with respect to this issue). It involves the total spectrum of human behaviour and its determinants. The emphasis of human resource stakeholders is to make full use of *competences* to optimise overall productivity of an individual; they also intend to address *competence* shortcomings.

Theories of mind have generally suffered from the fundamental mistake of focusing explanation primarily on either the organism or the environment as the primary source of knowledge or intelligence (Fischer & Bullock, 1993)[1]. Similar is the case with the theories of *competence*. These have been fundamentally flawed by their locus on the organism and their failure to recognize the contributions of context to *competence*[2]. We propose here a unique approach that fabricates competence in three aspects i. e. *person*, *institution* and *peers*, starting with the following assumptions. Competence can be quantified and has its direction in terms of amelioration and deterioration. Highest level of its abstraction has lent it obscurity; henceforth, it cannot be studied directly. It is only measurable when it is operational in either of the three i.e. person, institution and peers. The researchers strongly believe that institutional competence and peers competence can be quantified. The dynamics of changes in *competence* may be explained by the analysis of these components.

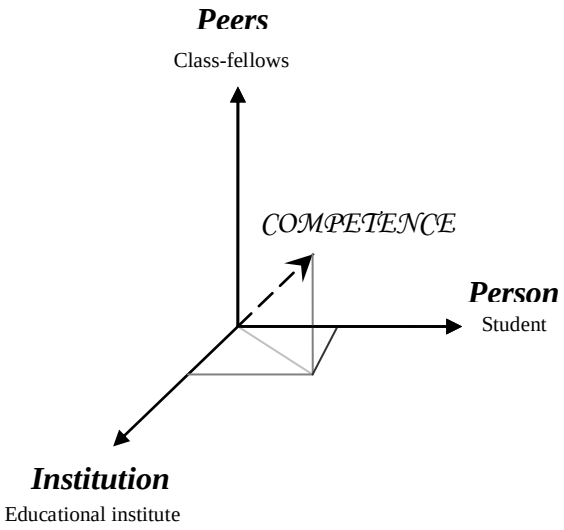
2. Three Dimensional Space of Competence Vector

Competence arises from the mutual collaboration among *person*, *peers* and *institution*, with competence changing when at least one of them is subjected to any change. Person is especially important in this collaboration, moulding the context to support particular kinds of actions and thoughts in those they interact with. The effects of this sort of social support are dramatic, producing sharp shifts in individual's *competence* level.

[1] Wozniak (Ed) et al (1993)
[2] Wozniak (Ed) et al (1993)

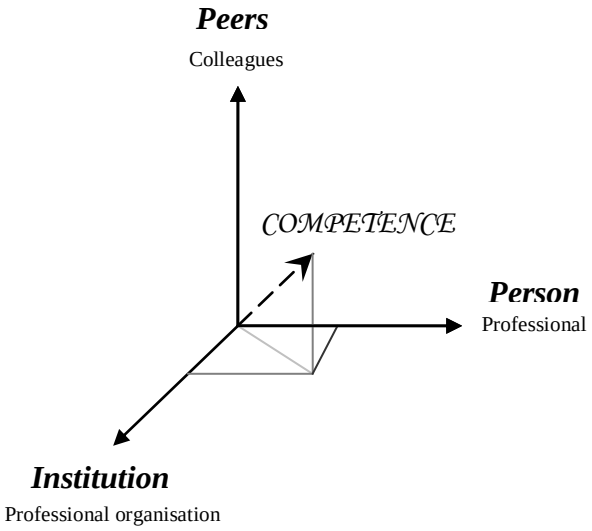
It rises sharply with the provision of support and drops dramatically when the support is removed. Two-phase depiction of three dimensional (3D) space of *competence* vector is shown in the figure. At phase 1 *person* is identified as the student, *peers* refer to the class-fellows, and *institution* is the educational institute. Whereas at phase 2, *person* is identified as a professional, *peers refer to colleagues*, and *institution* is the professional organisation. *Person* is denoted along x-axis. Then there comes *peers,* which is taken along y-axis; and finally, the *institution* represented along z-axis. Here, although, *person* appears to be central; yet the other two are necessary and sufficient for the complementarity of 3D space of *competence*. Presently only x component of the vector has been more in focus; and of course there is some reason for this focus. It is all agreed upon that at the moment it is almost impossible to include all three, simultaneously, under examination. However, it would be better to include them all for a global and more comprehensive picture. One cannot deny intricate complexities involved in the process of development and the use of *competence* at any moment as well as phase.

Figure 1: Phase 1–Three dimensional representation of competence vector in educational phase



This idea, as far as the applicability is concerned, is workable at both phases of social success i.e. educational as well as professional. It is as good during the educational career as it is in the professional career. Phase 1 qualifies for educational career and phase 2 refers to professional career. In social continuum there could also be a period of time where the two phases overlap each other. Carrying studies parallel to work, pre-job-training and on-job-training may explain the possibilities of overlapping. The most recent trend of *lifelong learning* is sufficient to reaffirm this possibility. In *lifelong learning* the two phases are supposed to absolutely overlap each other, but only after a certain period of initial education and training.

Figure 2: Phase 2 – Three dimensional representation of competence vector in professional phase



The concept of *competence* permeates not only in its totality but also in each dimension. To us, although, at the moment it is inexplicable and inseparable at all, yet we believe that it can be considered as a vector; and its rate of change, either increasing or decreasing, could also be observed in both positive as well as negative directions provided with certain conditions affecting its magnitude as well as direction.

3. Conclusion

It is concluded that competence is represented with a vector in 3D space. This space could be extended to infinite number of components exactly like any physical quantity. Competence has now been quantified through ordinal scale. The direction of this vector is observable only when it is operational. It changes with time and situation both in positive as well as negative direction. It exhibits aging phenomenon in itself; henceforth strengthening the notion of lifelong learning. However, this phenomenon has not been talked about so far.

4. References

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