Title of paper: Curricula 3D Visualisation: a Tool of Education Quality Assessment in Public Administration School

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Abstract:

Generally a curriculum represents a set of courses and their syllabi literally as a simple list presented often in Excel format, or to some extent more sophisticated chart of visually scattered subjects classified by number of credits, type, year, level of complexity, or cycle. Thus, it is not visually easy either for students or for teachers to analyze curricula as a common system, to understand relations between different courses, to identify pre-requisite courses (for students choosing between the electives), and to somehow find some common denominator between syllabi of the same curriculum.

In our paper we are presenting an applied product that we call 3D-iCurricula. 3D-iCurricula, modern electronic means of visualization, may be used as a tool for in-depth understanding of the process of education not in some parts, but as an integral system. With 3D-iCurricula, the educational program is transformed into 3D-cylinders, that visualize groups of interrelated excel tables, and allow to see pre-requisite courses, classify visualized data by types of courses and majors. Access to syllabi is provided by simple clicking on a course in the cylinder[1]. We put more stress on the synergetic value of «prerequisite» interdisciplinary links in their scope, allowing for a more founded choice of course sequence within a curriculum. Presenting curriculum as a revolving cylinder and defining its programmatic processing algorithm allows us to see prerequisite blocks of disciplines, areas of different departments' responsibility, to read the programs of disciplines just by double-clicking on the icon of any discipline, and, as the result, to build individual education tracks as well as classify the whole curriculum by majors, scientific fields and cycles. Equally, the system allows for easier and scientifically grounded comparisons, juxtaposition and adjustments in-between curricula which are treated not as a fragmented and inertial system but as an interrelated synchronized structure of knowledge leading to certain skills. Building on the hypothesis that circle is the most harmonious form, actual findings after application demonstrated that the system is scalable for more parameters and may benefit a larger group of academic stakeholders. An extended system might feature competence-tailored education tracks. Also, 3D-iCurricula allow to compare programs of different Public Administration Schools by their intensity, research or practice orientations, course composition and structure.

To ground our findings, we compare bachelor curriculum for certain majors of School of Public and Environmental Affairs at Indiana University and School of Public Administration at National Research University - Higher School of Economics (Moscow, Russia) and estimate, hence, their separate intrinsic qualities and cross integration opportunities.

[1] See the following web-site for general overview: http://graduate.hse.ru/RUP/endProjectAll3.html