Orestad 高中 (建筑设计 3XN)

丹麦案例：论学校建筑与学习场所
School Architecture and Learning Conditions, Danish Case

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　　我想通过这篇文章谈一谈丹麦或北欧是如何建造教育环境，以及通过这些环境的建造，我们能获得什么。

差异化学习的景观

　　丹麦的小学和初中为6~16岁儿童提供教育，在某种程度上，和高中一样，也都在经历着一个组织形式上的变革，这种改变体现在学校环境的改变。这些变化有着清晰的跨国发展的趋势，正如我们在其他北欧国家看到的一样，现在那里对所谓的差异化学习环境有需求，这种环境有利于开展日常的学校实践，而传统的教室只是其中很多教学场所中的一个。你经常会看到这样的语句："我们为未来建造学校"。差异化学习环境分为学生们在校的学习空间、自主学习空间和团队合作空间三部分。这些空间和室内装饰丰富了日常的教室景观，可供不同人群选择。在世界很多地方，教室布置一般是成排的桌子、桌子后放置硬木椅子，学生坐在椅子上面对教师和黑板（白板或电子智能板）听讲。在面对多种可供选择的学习环境时，我们不采用单维度环境或一种座位排列形式，团队工作可在升降平台上进行，这个平台环境可以是封闭的，也可以是能让学生俯瞰整个区域或楼外环境的。学生们能在角落里找到远古的壁龛，甚至能一同坐在楼梯台阶上。学生能在柔软外形的"读书管"里找到单独的读书场所，或是把豆子袋拎到任何想呆的地方坐下来——可以一个人坐或是和其他坐在长椅、窗沿或躺在地上的同学一起。

By this article I aim to give an impression of current ideas about how to build educational environments from Danish or Nordic perspectiveand what is to be gained by these environments.

The landscape of differentiated learning

Primary and secondary schools in Denmark (that is education for the 6-16 year old children), and to some extend high schoolsas well, are going through organizational changes that are manifested in changes in the built environment of the schools. These changes have a clear and cross country tendency, as we see similar changes in the other Nordic countries: There is a demand for so called differentiated learning environments to facilitate an everyday school practice in which the traditional classroom is only one of many sites in which learning takes place. We are "building schools for the future" – an expression you find again and again. Differentiated learning environments are spaces at school that the pupils can go to, on their own or in groups. These spaces and interior decoration offers alternatives to the landscape of the everyday classroom, which is known in so many parts of the world as a landscape of tables on rows, hard chairs behind tables, pupils at the chairs facing the teacher and the chalkboard, or the whiteboard or smartboard. Within the alternative or supplemented landscapes of learning instead of having one single level (and one single form of seating) where everything takes place, groupwork may take place at an elevated platform – either a closed platform environment – or a platform that gives the pupils an overview of the area and perhaps the environmentoutside the building. Or the pupils may find a remote niche in a corner, or even sit together at the main stairs. The individual who seeks a spot for reading may hide in the soft coated 'reading tube', or take a beanbag and place it somewhere desirable - either to be alone, or to sit with other pupils who are also in beanbags, at couches, in windowsills or lying at the floor.

Arkitema Architects 绘制的一所名为'Vibeengskolen'的新式学校
http://www.arkitema.dk/Energi/Projekter/Vibeengskolen.aspx

Bosch & Fjord 为Ordrup学校设计的"阅读管"

以上的构想和当代流传在北欧国家的一些想法不谋而合。在阐述"自主学习类型"和"学习主体"时,有这样的说法:学生有不同的需求和不同的学习方式,学校的组织形式及学校环境必须考虑到这一点,还要探索如何以最佳形式方便学生的学习,帮助他们获得成就。

未来和全球化人类资本

校园建筑的改变不应当仅仅是艺术和实用层面上的。行政机构层面对学校建筑也很有兴趣,例如,通过白皮书和启示宣传册的形式,市级和州级的行政者对于学校内部和外部的装修给出了建设性的意见指导。新建筑及其内部装饰在设计上融合了当代学习和管理的理想,并且展示了政府最终抛弃旧式工业社会学校形式的雄心。这样,通过建设新学校或翻新现有学校,对校园建筑进行建筑的调整,就有力地回应了校园在管理上面临的挑战。这些挑战包括对领导权力的整合、对教师教学和育人实践的整合,对不同类型学生不同塑造方法的整合。也就是说,改变、未来和建筑这些元素被糅合在一起,成为一种管理学校的技术。

学校是一个极端复杂的组织,有着复杂和自相矛盾的需求。经济合作与发展组织在当代有过两个演说,分别是"有效学校"和"强力领导",这些促使政府对学校提出了具体的成果要求,与之相符的是,上面提到的新技术着重于优化与平衡学习氛围和建筑的关系,以便培养出最能适应未来生活的学生;使领导事务变得越来越复杂,使每日的学校实践生活中的学习和工作变得越来越复杂,也使2011年丹麦政府提出的目标"优化在校每个学生的学习能力"变得越来越复杂。

换而言之,经济与教育体系的全球化使学校建筑面临很多问题,例如如何能最好地塑造未来的劳动力(就是学生),以便使他们能应对未来的需求、全球化竞争或是合作;建筑及其内部装饰如何帮助学生创新及塑造自身。目前,创造差异化学习环境的景观不失为一个好的答案。

倾听学生们的声音

改变学校最重要的工作之一就是倾听学生们的声音。你要询问他们"当你参加学习活动时,你认为最优的环境是什么样的?"和"你认为学校为你建设些什么设施,会使你感觉到舒服和愿意学习?"我在学校参与的一个讨论组正是向学生询问了这些问题,应答者可以以语言、图画或模型的形式回答问题,其中一个回答就是"我的空间要既能进行团队合作,又能容纳个人单独工作。在这里你能舒服地坐在豆子袋上或窗沿上。这里也要有一个高平台,当一个人想安静的时候就坐在上面。"

换句话说,学生们陷入了革命性的想法中,努力把自己塑造成与环境相称的学习的孩子,他们仿佛在创造一段历史。在那里,他们共同拥有一种语

These possibilities resonates with contemporary ideas – as circulated in Nordic countries – about 'individualized learning styles' and about 'the learning body': Pupils have different needs and different ways of learning and the organization of the school and the environment must take that in account and search for how to facilitate the processes and achievements in best ways.

The future and a globalized human capital

The changes of the school architecture are not only aesthetic and practical. The interest in school architecture is also apparent on the level of administration, for example, in the form of white papers and inspirational leaflets on refurbishing the interior and exterior of schools produced by actors in as well Municipal and State. The new architecture and its concomitant interiors are choreographed with contemporary ideals of learning and management, and with governmental ambitions of finally leavingbehind the school of the former industrial society.In that way, the architectural intervention of changing school buildings by building new schools or remodelling existing schools is also a response to a managerial challenge: the (re) management of leadership, of teachers' pedagogical and didactic practice, and of the 'shaping' of specific forms of learning pupils. I.e., stories of change, the future and architecture are woven into each other as a technology of managing the school. The school is a highly complex organization with complex and contradictory demands. In combination with the OECD's contemporary discourses of "effective schools" and "strong leadership", which give rise to governmental demands for specific results from the schools, this new technology (of optimizing the interplay between learning and architecture in order to produce the best possible pupil for the future) leads to an increasing complexity of leadership and of working and learning in the everyday practice of school life, as well as a goal of "optimizing the capacities of learning for each child in school" (Danish Government, 2011).

In other words, the globalization of the economy and the education systems is haunting the school buildings with problematics such as: How is the future 'work force' (i.e. the pupils) best shaped in order to meet future demands and future global competition and (hopefully) corporation.And how may architecture and interior design help innovate and shape the meeting of such demands. And currently, the landscape of differentiated learning environment is part of the answer.

Ask the pupils

Part of this complex of changing the school is also to listen to voices of the pupils and to askquestions like "how is the optimum environment for you when engaged with learning activities – and how would you like us to build in order for you to feel comfortable and to feel 'learn-able'?". As I followed a workshop at a school which asked these questions, the pupil could answer – in words, in drawings and in model-building (see also picture x and x): "My space is a space for both group work and individual work. Here you can sit comfortably on beanbags and windowsills. There is also a platform. If you want some quiet time, you can sit up there"

In other words: The pupils 'tap into' the historical specific ideas and shapings of 'the learning child'. There is a language that they can access and there are materialized examples of environments to which they can point at and answer "I like this", "I would like this for my school and my school life, for the near future". Many pupils report that it is a hard task to be seated at the hard chair, by the table (I.e 'traditional seating'). Sitting still is actually a task that needs constant care. And so the pupils welcome the opportunity for alternatives within a long school day.

The idea and hope is that by paying an interest in the pupils' voices and trying to meet some of their ideas and demands, then a positive environment of learning is

言，他们能指着环境中的具体实物说，"我喜欢这个"或"在不久的将来，我希望我的学校和学校生活会是这样的"。很多学生说坐在桌边的硬椅子上是个艰巨的任务，这指的就是传统的座位排列方式，而坐着一动不动确实是一项需要一直集中注意力的任务，所以学生希望在一个漫长的上课日里能有一些不同的学习环境。

我们希望通过倾听学生们的声音，并满足一些他们的需求，进而能创造出一个积极的学习环境。更进一步，通过灵敏地察觉到学生多样化的需求，我们要激发学生们学习和不断努力的愿望，并帮助学生成为能够规划自己学习过程的人。

催生选择的空间

差异化学习环境的一大特点就是在那里能催生各种选择。可以这样理解这个名称：时间、空间和人物主体在新的学校建筑中必须以新的方式被重新组织成各种形式。学生应至少被允许在上课日的一部分时间里自主选择学习空间，并让这些空间帮助自己的学习。他们可以选择坐在一起的同学，他们必须利用好时间以便及时完成功课。老师不会紧盯着学生，催促他一直工作。相应地，老师的角色也发生了改变：当教学组织单元不再是"教室"时，课堂管理必须要重新定位。老师和学生的关系也必须改变：在学生的差异化学习环境里，老师应在某种意义上变成一个"访问者"。换句话说，传统学校生活正在受到不断催生选择的差异化学习环境的挑战。要意识到当建筑改变时，教学方法必须同时发展和创新，这很重要。老师们不得不有意识地把空间、设计与教学实践结合起来，他们必须精巧构思，以求在培养学生方面达到最佳的效果，同时必须革新对学校组织的管理。

建筑及其内部设计的特征十分重要，它潜移默化地影响着我们每天人际沟通的方式，影响着我们如何理解作为学习主体的自己、同学和老师。当传统的教室辅以差异化的学习环境时，学习设计的景观会产生更为深刻复杂的影响：并不是所有的差异化工作都运转得很好，它们之间存在着互相抑制又相互促进的关系。建筑师需要有高度灵敏的感觉，细致体察人群和教育类建筑之间那种微妙的互动过程。

右侧图片中的形式能被采纳吗？

produced. And furthermore the idea and hope is that through this sensitivity towards multiplicities of pupil-needs it is possible to increase the pupils desire to learn, desire to make an extra effort – and to make the pupil shape herself/himself as a pupil that can govern her/his own learning process.

Choice accelerated spaces
One of the characteristics of the differentiated learning environments is that they are"choice accelerated spaces". What is underscored by this naming is that time, space, and bodies have to be governed in other ways in new school architecture. Pupils (at least for part of the school-day) are supposed to choose learning spaces on their own and let these spaces enable their learning, they must decide which other pupils they will sit with, and they must manage their time so that they do their work 'in time' – without the gaze of the teacher telling the pupil to "keep working". As an effect, the role of the teacher changes concordantly: classroom management must be rethought when the organizing unit is not 'the classroom', and the relations between teacher and pupils alter, when the teacher becomes some version of a 'visitor' in the pupils differentiated learning environment. In other words, the obviousness of school life ('traditional school life') is challenged in the choice accelerated differentiated learning environment.It is important to realize that when the architecture changes, the didactics have to be developed/innovated as well: The teachers have to add an awareness of how the space and design co-shape

the learning and teaching practices, and they have to work strategically in order for the best results to take shape. And the managing of this school organization must undergo changes as well.
The specificities of the architecture and interior design has an important role to play in shaping the tacit ways that we relate to each other in the everyday, and how we conceive ourselves as learning subjects, classmates and teachers. The landscape of learning plays a more diverse, complex and important role when the traditional classroom is supplemented by a differentiated landscape: not all differentiations work equally well and each hinder something and promote other things. A heightened sensitivity as architect in trying to understand the tacit processes of the interplays between humans and educational architecture is called for.

Examples of Pictures that Could be Included?
Left photo: Model of a working area at school, produced by a pupil in a workshop that asked the pupils about learning environments that they would like to have at their school. The green puffy things in the model are large beanbags, the yellow dots on the walls are windows. The windows are meant to be deep so pupils can sit on the windowsills. Right photo: The text says: "My space is a space for both group work and individual work. Here you can sit comfortably on beanbags and windowsills. There is also a platform. If you want some quiet time, you can sit up there".
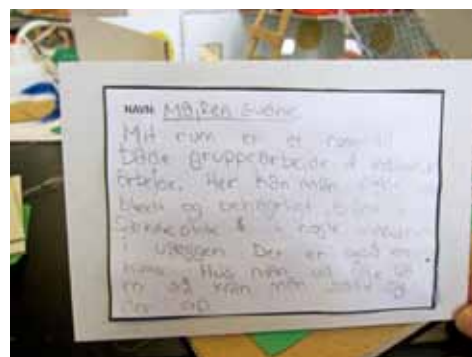
By MalouJuelskjær.Associate Professor, PhD, University of Aarhus, Denmark.

工作坊一个学生制作的学校的一处工作区域的模型。这是他（她）想在学校拥有的学习环境。模型中的绿色膨胀物是大型的豆子袋，墙上的黄点是窗户。窗户的进深要大，以方便学生们坐在窗台上。

同一个项目的更多模型

我的空间要既能进行团队协作工作，又能容纳单独一人工作。在这里你能舒服地坐在豆子袋或窗台上。如果需要一个人静一会儿，你也可以坐在一个高平台上。

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