



Delft University of Technology

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## Study place preferences: quiet please!

*Theo van der Voordt*

**Attractive and appropriate study places can contribute to students' learning performance and show to have an impact on where to study. But what does 'attractive' and 'appropriate mean? Recent PhD research sheds more light on what students want.**

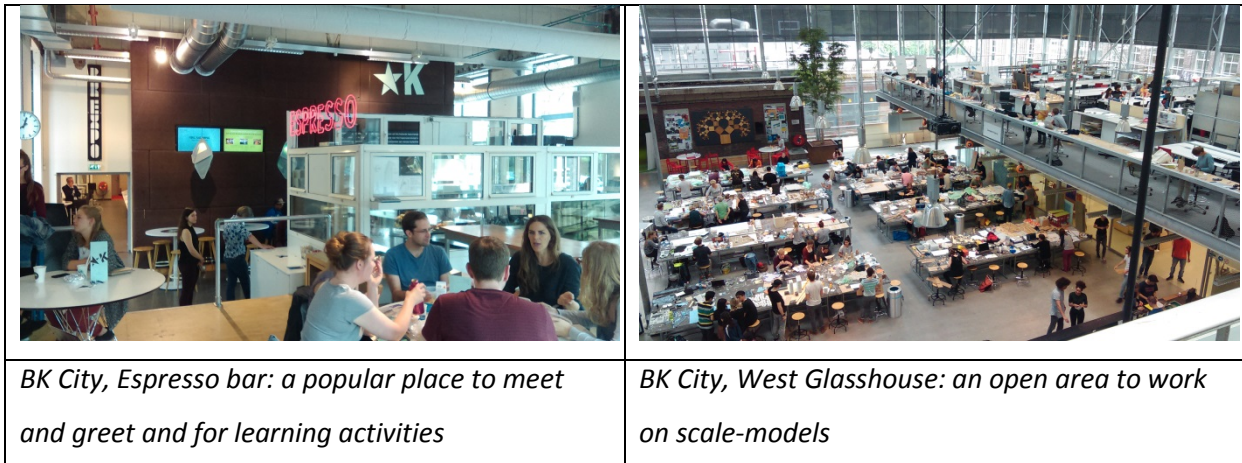
13 May, 2008: Black Tuesday! Due to a stupid short circuit in one of our coffee machines the old faculty building at Berlagestraat 1 completely burnt down. Maybe it is no coincidence that in Spain, Greece and other countries Tuesday 13 is called the unlucky day. This disaster caused heavy emotions among staff, students and alumni. Apart from having lost important information and personal belongings, the former faculty building was connected with many memories and beloved as an icon of Functionalism, designed by Van den Broek and Bakema. From the first day on, the faculty and the TUD community showed to be extremely resilient. One day later Dirk Jan van den Berg, then chair of the TU Delft Executive Board, presented what to do in a fully occupied Auditorium of the TU Delft. The next Monday our education restarted in huge tents at the BK Camping, opposite to the former spot. And in September 2008 our first year students entered the renovated BK City building at Julianalaan 134. A good example of high speed accommodation management!



*The former faculty building at Berlageweg 1, before and after the fire*

After the fire, Wytze Patijn, at that time the dean of our faculty, took the opportunity to realise his dream: creating a vibrant faculty building where staff and students can easily meet in rather open environments and 'public' spaces such as huge atria, an Espresso bar, and an easy-to-access canteen in the former boiler house. It was also the start of introducing so-called activity-based workplaces. Staff members have no longer a personal desk but share a variety of work places in their

departmental domain and can also use work places elsewhere in the building. A first evaluation showed that most staff members like the current BK City building very much. However, a number of staff people complained about a lack of privacy, lack of concentration due to distraction by colleagues and phone calls, and a shortage of storage space (Gordievsky et al., 2010). These findings were confirmed in a graduation study by Van Akkeren (Van Akkeren et al., 2010) and a survey by Leesman (Bentinck and De Jong, 2012).



### **Student preferences**

In all three Bk City Post-Occupancy Evaluations, no students were asked about their opinion and experiences. To my knowledge, this never happened at our faculty so far. This is remarkable, because a nice, attractive and appropriate study environment may influence students choice where to study (Price et al., 2003; Matzdorf and Greenwood, 2015). A recent PhD study by Beckers (2016) presents interesting research findings about what students from Universities of Applied Sciences want. Based on a survey among student of the Han University of Applied Sciences (N = 687, response rate = 71%) it was found that most students agree with the statements “Learning spaces are important” and “Learning spaces influence the results of my tests” (average scores of 3.67 and 3.71 on a 5-point scale, from 1 = fully disagree to 5 = fully agree) (Beckers et al., 2016a). This perceived impact on study performance has hardly been tested empirically by sound research (Fisher, 2001). In the same survey, Beckers also asked the students about the preferred social and physical characteristics of study places for individual learning and collaborative learning, what they like and what they find important. For individual concentrated study activities students prefer to study at home (quiet, free to listen to own music) or at quiet learning spaces within university buildings offering the possibility to retreat. Quiet public areas rank a little lower but are also well appreciated. Students don’t prefer busy, open spaces, neither in the university building, nor in public areas. For collaborative study activities with peers, students favour quiet, closed learning spaces at the university as well. All other

learning space are less or much less preferred for collaborative study activities. No clear relationships were found with gender, age, study year and living situation. Students who find privacy important perceive interaction a little less important than the average score, whereas students who find interaction and autonomy important also rank comfort somewhat higher on perceived importance than the average student. The four factors regarding the physical dimension - perceived importance of comfort, aesthetics, ICT and layout - were all significantly correlated. Apparently, students who find one of these four characteristics more important than other students also find the other three characteristics important above average. This might indicate that these students are more aware of (the impact of) the physical environment. The perceived relevance of comfort and the preference for closed learning spaces showed a notable significant correlation, too. Apparently, closed spaces are experienced more comfortable than open spaces. Overall, students show to highly favour quiet places above busy places, both for individual and for collaborative learning activities. Because privacy is not very high ranked on level of importance, the main reason for this preference seems to be a functional one: in a quiet environment students perform better.

### Actual behaviour: choice of study places

In a separate study, Beckers (2016) asked 52 business management students to keep a diary of their study activities for one week and to record *what* they are doing, *where* these study activities are conducted, and *why there*. The diary format is shown in the figure below.

What - learning activity	Where - learning space	Why - motivation
<p>Select one activity</p> <ol style="list-style-type: none"> <li>1 - Independent study</li> <li>2 - Autonomous working on assignments outside lessons</li> <li>3 - Routine activities</li> <li>4 - Attending lessons and lectures</li> <li>5 - Cooperative activities, working in small groups led by a teacher during lessons</li> <li>6 - Collaborative activities, working in small groups without a teacher outside lessons</li> <li>7 - Tutorial consultation</li> <li>8 - Social activities</li> <li>9 - Wireless networking</li> <li>10-Activities other than mentioned above</li> </ol>	<p>Select one learning space used for that activity</p> <ol style="list-style-type: none"> <li>A- At home</li> <li>B - In a classroom or in a lecture hall</li> <li>C- Open area at school with student work stations</li> <li>D - Project room at school</li> <li>E - Corridors, hallways, atria and lounges at school</li> <li>F - Campus open learning centre</li> <li>G - Restaurant/café in the school building or on the campus</li> <li>H - Outdoor spaces on the campus</li> <li>I - On the way to school or home</li> <li>J- Public restaurant/café</li> <li>K - Public library</li> <li>L- Spaces other than mentioned above</li> </ol>	<p>Select one or two reasons for the use of that learning space</p> <ol style="list-style-type: none"> <li>1 - I could not choose the learning space because it was scheduled</li> <li>2 - Vicinity, this was the nearest learning space</li> <li>3 - The preferred learning space was not available</li> <li>4 - Comfort and aesthetics (<i>finishing</i>) of the environment</li> <li>5 - Preferred privacy and concentration</li> <li>6 - Availability of catering services</li> <li>7 - Availability of equipment and technology</li> <li>8 - Preferred social interaction, the role of group membership</li> <li>9 - Habit</li> <li>10-Unaware of the reason or with no specific reason</li> <li>11-Reasons other than mentioned above</li> </ol>

Diary format including what, where and why (Beckers et al., 2016b)

The 52 students reported 1836 learning activities and 2200 reasons to motivate their choice where to study. Independent study activities showed to be conducted mainly at home (59% of the time) or in public spaces such as on the way to school or home or in a restaurant/café (31%). Autonomous working on assignments outside lessons occurred most frequently at home as well (64% of the time). Collaborative learning activities outside lessons in open areas occurred mainly in open areas at school (58%) or at project rooms at school (27%), whereas social student activities were conducted everywhere, in particular in open areas (28%), outdoor spaces on the campus (18%) and public spaces outside the school (23%). In total, 14% of all learning activities were conducted in public spaces outside the school building. The main reasons to study at home are vicinity (no need to travel), comfort, and personal control e.g. the freedom to combine learning activities with other activities. The main reasons to study at school are scheduled study activities at a particular place and social interaction, whereas when students choose public spaces an important reason is its vicinity. Remarkably, quite often no specific reason was mentioned here (46% of these place/motivation combinations). First year students choose open learning spaces more often than second and third year students. Additional interviews showed that overall functionality and suitability seem to overrule other motives such as socialising. A simple thing such as the availability of electrical power outlets for a laptop can make the difference between yes or no choosing a particular study place.

The growing use of open areas is reflected in floorplans of recently built school buildings. A comparative floorplan analysis of an education building built in 1998 with three education buildings built in 2010-2011 showed that the percentage of class room space dropped from 71% in the building from 1998 to 50-62% in the newer buildings, whereas the informal learning settings increased from 1% in the older building to between 4-23% in the other three buildings (Beckers et al., 2015).

### **So what?**

The findings show that apart from good teachers, teaching methods and teaching tools, the location and design of study places do matter as well. Based on Beckers (2016) one might conclude that the main issue is to provide sufficient quiet places. However, walking around and watching many students that seem to feel pretty comfortable in more busy places, this conclusion would be too simple. Price et al. (2003) concluded that though quiet places are one of the most relevant study facilities of universities, opportunities for learning in entrance areas and corridors are important as well. In a study among 1,457 students in Norway it was found that the social areas contributed most to the overall student's learning space satisfaction (Sanberg Hanssen and Solvoll (2015). According to Higgins et al. (2005) catering areas in university buildings are also important for student's learning

activities. Probably part of the time social motives – liking to gather with peers, enjoying a lively atmosphere - prevail over functional drivers. In the current experience economy (Pine and Gilmore, 1999), having nice experiences is a key condition for a positive appraisal of a product or service. It may be concluded that in addition to (scheduled) class rooms it is important to provide both quiet informal study places for individuals and small groups and more lively places to combine learning with socialising and having fun. The most important challenge is to find the right balance between efficiency, effectiveness and experience value, and to quantify the need for different places. Involving both students, policy makers, real estate and facility managers and financial controllers in decision-making may be helpful in finding just the thing we want to find all of us: the egg of Columbus.

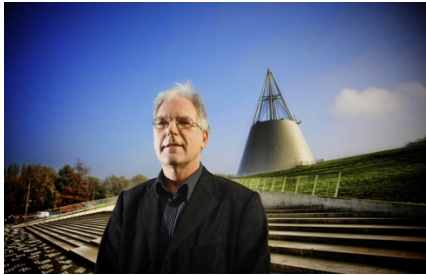
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### **About the author**

Theo van der Voordt is emeritus associate professor of Corporate Real Estate Management at the Department of Management in the Built Environment, Faculty of Architecture TU Delft. His research interests focus on workplace management, performance measurement, adding value by real estate and facilities management, vacancy and adaptive reuse, and health care facilities. He was the co-promotor of Ronald Beckers' PhD research on learning environments.