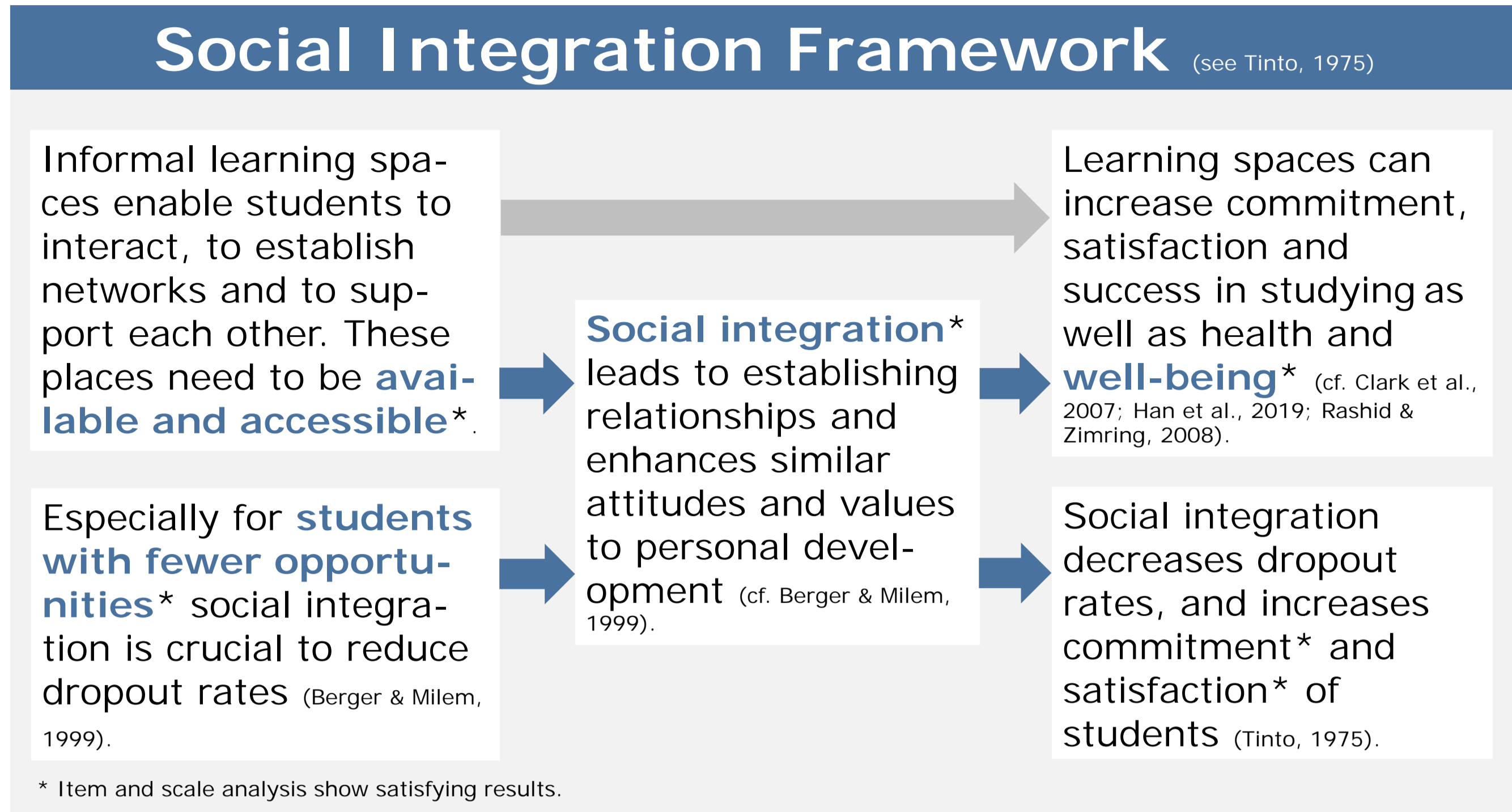# The Impact of Inclusive Informal Learning Spaces on Student Experiences and Strategies to Support User Needs

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NIILS — New Approaches for Inclusive Informal Learning Spaces

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Social Integration Framework (see Tinto, 1975)

Informal learning spaces enable students to interact, to establish networks and to support each other. These places need to be **available and accessible**[*].

Especially for **students with fewer opportunities**[*] social integration is crucial to reduce dropout rates (Berger & Milem, 1999).

Social integration[*] leads to establishing relationships and enhances similar attitudes and values to personal development (cf. Berger & Milem, 1999).

Learning spaces can increase commitment, satisfaction and success in studying as well as health and **well-being**[*] (cf. Clark et al., 2007; Han et al., 2019; Rashid & Zimring, 2008).

Social integration decreases dropout rates, and increases commitment[*] and satisfaction[*] of students (Tinto, 1975).

[*] Item and scale analysis show satisfying results.

Informal learning spaces are places that students choose **independently and self-organized** for various (individual or collaborative) **learning activities** outside of classroom teaching (Cerasoli et al., 2018; Ninnemann & Jahnke, 2018).

Overarching, relevant criteria for the appropriation and use of learning spaces relate to the **availability** and **accessibility** of places as well as the quality of the infrastructure (cf. Tomaševski, 2001; Ninnemann, 2018).

Data show that the **availability and accessibility** of informal learning spaces **increase well-being** due to **higer social integration** of students. Informal learning spaces and social integration are crucial to **decrease dropout rates.**

NIILS project partner: University for Continuing Education Krems, **Austria**; HTW Berlin, **Germany**; Sapienza University of Rome, **Italy**; Mykolas Romeris University, **Lithuania**; Akdeniz University, **Turkey**

Photo 1: Informal learning space, HTW Berlin

In summary, the **quantitative findings are alike across all five universities and countries** although demographic characteristics as well as the size of the universities and the campus infrastructures are different.

Photo 2: Informal learning space, HTW Berlin

In summary, the **qualitative findings indicate no considerable differences** in users´ knowledge of barriers as well as approaches to overcome barriers **across all five universities and countries**.

Perspective of students and lecturers on informal learning spaces and barriers to use these places

Informal learning spaces are important for the social integration and well-being of students.

Informal learning spaces are especially relevant for students with fewer opportunities.

Organisational barriers reduce the availability and accessibility of informal learning spaces to a great extend.

STRATEGIES TO HANDLE BARRIERS

A. **Knowledge and transparency** about the availibility and accessibility of informal learning spaces are relevant.

B. **Activation of various places** on campus for the (extended) usage of informal learning spaces is essential.

PRACTICAL CONCLUSIONS FOR UNIVERSITIES & CAMPUS MANAGEMENT

1) **Provision of information** about informal learning spaces and their usage & characteristics → Mapping Plattform

2) **Development of networks** to promote the improvement of informal learning spaces → Learning Community

3) **Communication of the relevance** of informal learning spaces to increase awareness of users, enablers and executives. → Guidance Material
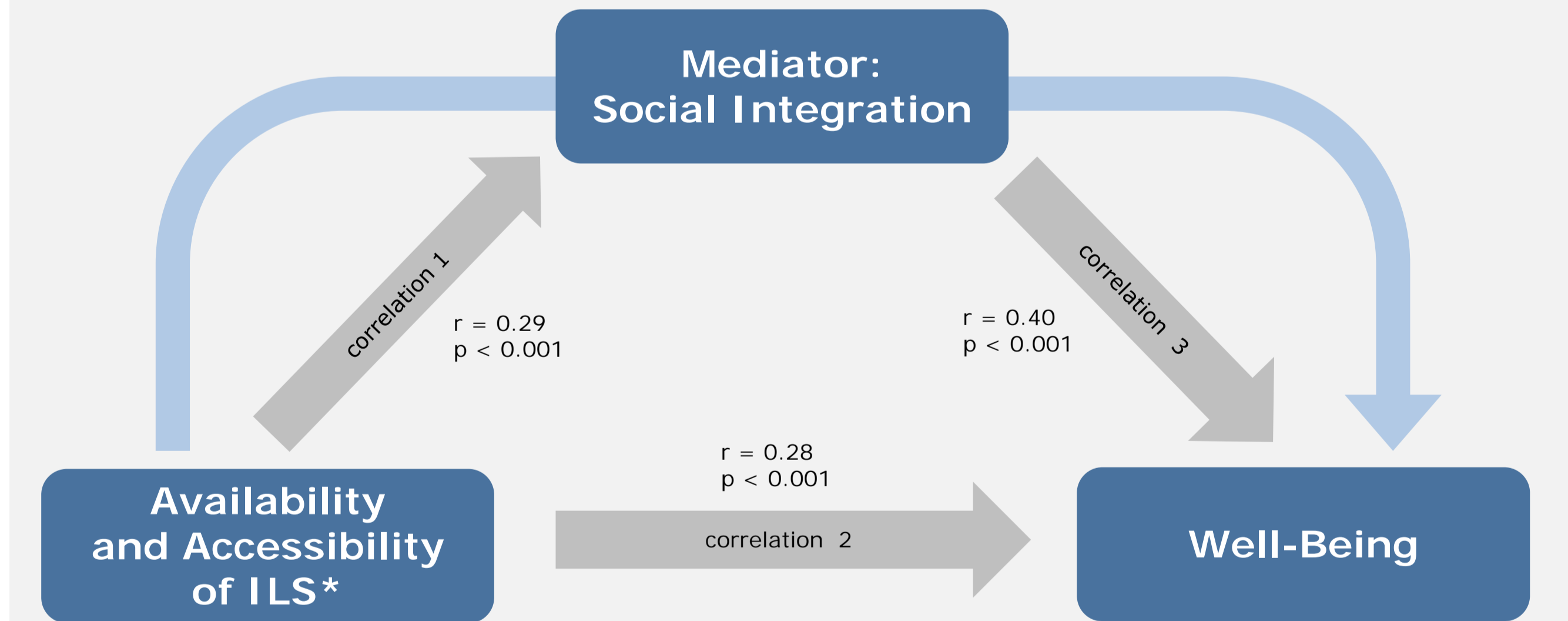
Quantitative Research

Research question 1: Is the relationship between availability and accessibility of informal learning spaces and well-being mediated by social integration?

Research question 2: How do students with fewer opportunities perceive availability and accessibility of ILS, their social integration and well-being compared to students without fewer opportunities?

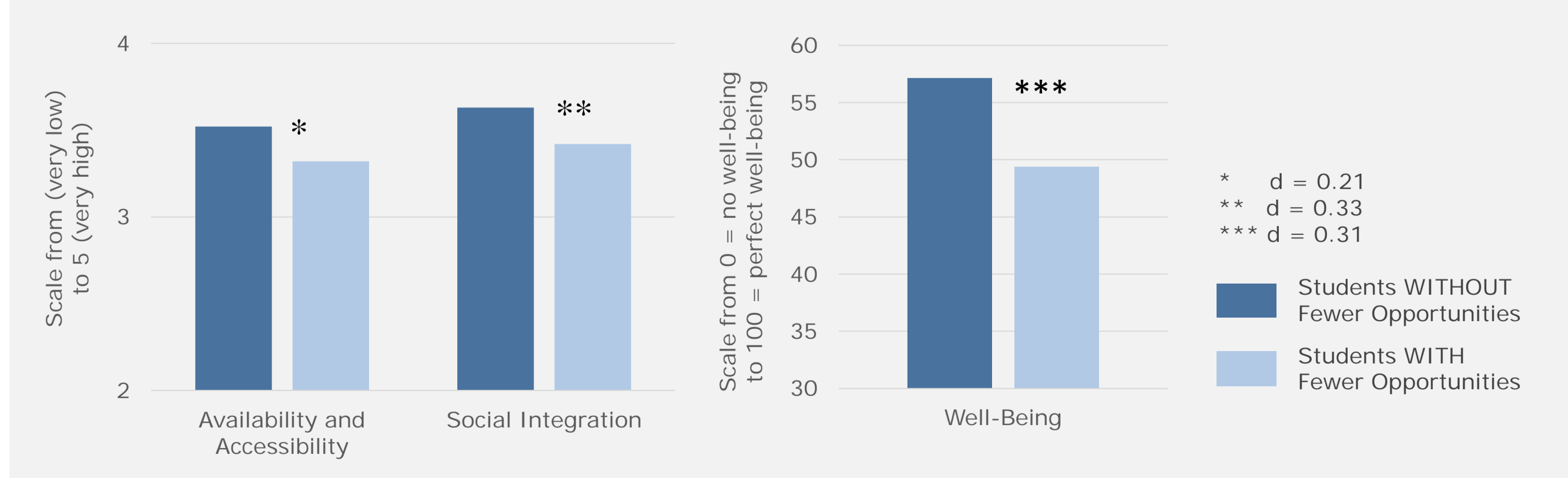**Online survey**: May–July 2022; **Sample:** N = 1,037 students

Demographics: Age: 54% 21-25 years, 26% > 26 years, 20% < 20 years; **Gender:** 58% female, 39% male, 3% no answer: **Study:** 82% Full-time, 18% Part-time: **Aimed Degree:** 62% Bachelor, 30% Master: **Challenges of students with fewer opportunities** (top 5 of all 11 challenges): 35% need to work, 26% economical obstacles, 20% mental diseases, 10% language, 10% geographic obstacles: 30% of the participants perceive no challenges

Insights on student perceptions

Mediator: Social Integration

correlation 1 — r = 0.29, p < 0.001
correlation 3 — r = 0.40, p < 0.001
correlation 2 — r = 0.28, p < 0.001

Availability and Accessibility of ILS[*] → **Well-Being**

Figure 1: Results of mediation analysis regarding research question 1

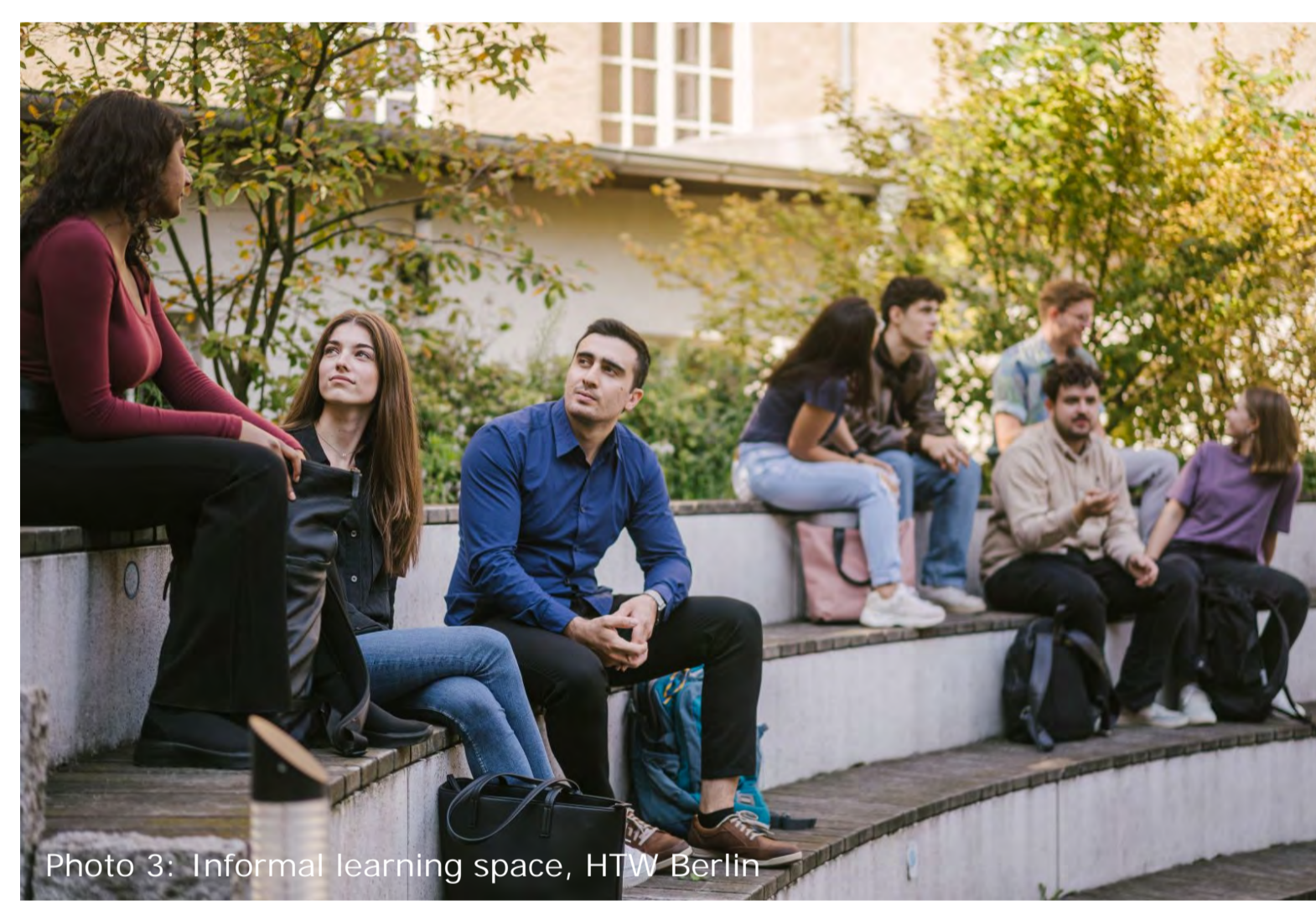[*]ILS – Informal Learning Spaces

Results research question 1

- The higher availability and accessibility of informal learning spaces, the higher (1) the social integration and (2) the well-being of students.
- The higher the social integration, the higher (3) the well-being of students.
- Social integration partly mediates the relationship between availability and accessibility of informal learning spaces and well-being.

Direct Effect: β = 0,28; p < 0,001, R²korr. = 0,08; Indirect Effect: β = 0,17; p < 0,001; R²korr. = 0,19

Scale from 1 (very low) to 5 (very high) / Scale from 0 (i.e. no well-being) to 100 (i.e. perfect well-being)

Availability and Accessibility (*) / Social Integration (**) / Well-Being (***)

* d = 0.21
** d = 0.33
*** d = 0.31

Students WITHOUT Fewer Opportunities / Students WITH Fewer Opportunities

Figure 2: Overview of results regarding research question 2

Results research question 2

Students WITH fewer opportunities perceive the availability and accessibility of informal learning spaces, their social integration and their well-being as significantly lower than students WITHOUT fewer opportunities.

Photo 3: Informal learning space, HTW Berlin

Photo 4: Informal learning space, HTW Berlin

Qualitative Research

Research question: What are barriers to use informal learning spaces and what kind of approaches could promote the usage and development of informal learning spaces on campus?

Focus group interviews: May–November 2022; **Sample**: N = 66

N = 34 students (incl. 18 students with fewer opportunities), N = 32 lecturers

Insights on barriers and related approaches

Organizational barriers	Infrastructural barriers
Poor overview of informal learning spaces (i.e. absence of maps, informative signs, and room booking system)	Limited technological infrastructure (i.e., lack of power plugs, weak WIFI)
Lack of information, transparency and knowledge (i.e., opening hours, knowledge how to use spaces)	Limited weatherproof (i.e., missing roofing for shadow or rain)
Locked spaces and controlled access (i.e. library, seminar- and computer rooms)	Lack of soundproofing (i.e., high noise level)
Restrictive rules of use (i.e., concerning consumption of food; permitted noise-level; bring along belongings)	Inadequate temperature
Occupation of spaces (i.e. overcrowded, too busy)	Lack of privacy and subjective security

Take effective actions

- Provide information with room booking systems or information sheets.
- Improve access via student ID cards.
- Enhance technological infrastructure (plugs and WIFI).
- Realize pilot projects with appropriate furnishings, acoustic and visual shields.

Raise awareness & communication

- Establishing channels for reporting issues and ensuring proactive action to promote informal learning spaces on campuses.

Sources: Berger, J.B. & Milem, J.F. (1999). The role of student involvement and perceptions of integration in a causal model of student persistence. *Research in Higher Education, 40*(6), 641–664. / Cerasoli, C.P., Alliger, G.M., Donsbach, J.S., Mathieu, J.E., Tannenbaum, S.I., & Orvis, K.A. (2018). Antecedents and Outcomes of Informal Learning Behaviors: a Meta-Analysis. *Journal of Business and Psychology, 33,* 203–230. / Clark, C., Myron, R., Stansfeld, S., & Candy, B. (2007). A systematic review of the evidence on the effect of the built and physical environment on mental health. *Journal of Public Mental Health, 6*(2), 14–27 / Han, H., Moon, H., & Lee, H. (2019). Physical classroom environment affects students' satisfaction: Attitude and quality as mediators. *Social Behavior and Personality: An International Journal, 47*(5), 1–10. / Ninnemann, K. (2018). *Innovationsprozesse und Potentiale der Lernraumgestaltung an Hochschulen: Die Bedeutung des dritten Pädagogen bei der räumlichen Umsetzung des „Shift from Teaching to Learning",* Waxmann, Münster. / Ninnemann, K., & Jahnke, I. (2018). Den dritten Pädagogen neu denken: Wie CrossAction Spaces Perspektiven der Lernraumgestaltung verändern. In: Getto, B., Hintze, P., & Kerres, M. (Hrsg.), *Digitalisierung und Hochschulentwicklung. Proceedings zur 26. Tagung der Gesellschaft für Medien in der Wissenschaft e.V. mit elearn.nrw,* Waxmann, Münster, 133–145. / Rashid, M., & Zimring, C. (2008). A review of the empirical literature on the relationships between indoor environment and stress in health care and office settings: Problems and prospects of sharing evidence. *Environment and Behaviour, 40*(2), 151–190. / Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research, 45*(1), 89-125. / Tomaševski, K. (2001). *Human rights obligations: making education available, accessible, acceptable and adaptable.* Right to education Primers No. 3. **Figures:** own presentation **Icons:** https://www.flaticon.com/free-icons **Photos:** HTW Berlin / https://www.htw-berlin.de/presse/pressefotos/