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ÍNDICE

1. **Arquitectura ficción: pensamiento lateral para el diseño social del espacio**. ***Fictional Architecture: Lateral Thinking for Social Design of Space***. Hernández-Falagán, David.

2. **Nuevas representaciones, Nuevas concepciones: "entender y hacer entender". MBArch ETSAB**. ***New representations, New conceptions: "to understand and to make understood". MBArch ETSAB***. Zaragoza, Isabel; Esquinas-Dessy, Jesús.

3. **Diarios creativos: el dibujar como germen del aprendizaje productivo**. ***Creative diaries: drawing as the seed of productive learning***. Salgado de la Rosa, María Asunción.

4. **La percepción en la revisión de proyectos arquitectónicos**. ***The perception in the review of architectural projects***. Sánchez-Castro, Michelle Ignacio.

5. **Comportamiento térmico en edificios utilizando un Aprendizaje Basado en Problemas**. ***Thermal performance in buildings by using a Problem-Based Learning***. Serrano-Jiménez, Antonio; Barrios-Padura, Ángela.

6. **Los talleres internacionales como sinergias generadoras de pensamiento complejo**. ***International workshops as complex thinking-generating synergies***. Córdoba-Hernández, Rafael; Gómez-Giménez, Jose Manuel.

7. **Wikipedia como recurso para la alfabetización mediática arquitectónica**. ***Wikipedia as a resource for media architectural literacy***. Santamarina-Macho, Carlos.

8. **Aprendiendo de Australia. El feminismo en la enseñanza y la práctica de la arquitectura**. ***Learning from Australia. Feminism in Architecture Education and Practice***. Pérez-Moreno, Lucía C.; Amoroso, Serafina

9. **Aprendiendo a proyectar: entre el 1/2000 y el 1/20**. ***Learning to design: between 1/2000 and 1/20***. Riewe, Roger, Ros-Ballesteros, Jordi; Vidal, Marisol; Linares de la Torre, Oscar.

10. **El mapa y el territorio. Cartografías prospectivas para una enseñanza flexible y transversal**. ***The map and the territory. Prospective cartographies for flexible and transversal teaching***. Bambó-Naya, Raimundo; Sancho-Mir, Miguel; Ezquerra, Isabel.

11. **Regletas urbanas. Moldear las estructuras del orden abierto**. ***Urban Blocks. Moulding open-order structures***. Rodríguez-Pasamontes, Jesús; Temes-Córdovez, Rafael.

12. **Mediación entre diseño y sociedad: aprendizaje y servicio en Producto Fresco 2019**. ***Mediation between design and society: service-learning in Producto Fresco 2019***. Cánovas-Alcaraz, Andrés; Feliz-Ricoy, Sálvora; Martín-Taibo, Leonor.

13. **Learn 2 teach, teach 2 learn. Aprendizaje-Servicio e intercambio de roles en Arquitectura**. ***Learn 2 teach, teach 2 learn. Service-Learning and change in roles in Architecture***. Carcelén-González, Ricardo; García-Martín, Fernando Miguel.

14. **Sistemas universitarios: ¿Soporte o corsé para la enseñanza de la arquitectura?**. ***University Systems: Support or corset to the architecture education?***. Fuentealba-Quilodrán, Jessica; Barrientos-Díaz, Macarena; Goycoolea Prado, Roberto; Araneda-Gutiérrez, Claudio.

15. **Los límites de la ciudad y el rol del arquitecto**. ***City Limits and the Architect's Role***. Esguevillas, Daniel; García Triviño, Francisco; Psegiannaki, Katerina.

16. **En busca del cuestionario necesario para el estudio de la didáctica de la arquitectura**. ***Looking for the necessary questionnaire for the study of architecture didactics***. Santalla-Blanco, Luis Manuel.

17. **Métodos docentes en la Era Digital: sistemas de respuesta inmediata en clase de urbanismo**. ***Teaching methods in the Digital Age: student response systems in an urbanism course***. Ruiz-Apilánez, Borja.

18. **Proyectar deprisa, proyectar despacio. Talleres de aprendizaje transversal**. ***Fast architecture, show architecture. Learning through cross curricular workshops***. Cabrero-Olmos, Raquel.

19. **Función y forma en matemáticas**. ***Form and function in Mathematics***. Rivera, Rafaela; Trujillo, Macarena.

20. **Collage digital y TICs, nuevas herramientas para la Historia y Teoría de la Arquitectura**. ***Digital Collage and ITCs, new tools for History and Theory of Architecture***. García-Rubio, Rubén; Cornaro, Anna.

21. **La formación en proyectos arquitectónicos del profesorado internacional. La experiencia de Form**. ***The International professor's formation at architectural design. The Form experience***. Martínez-Marcos, Amaya; Rovira-Llobera, Teresa.

22. **Proyectos 1: Estrategias proyectuales y diseño de mobiliario para el concurso Solar Decathlon**. ***Projects 1: Project strategies and furniture design for Solar Decathlon competition***. Carbajal-Ballell, Rodrigo; Rodrigues-de-Oliveira, Silvana.

23. **Aprendiendo construcción mediante retos: despertando conciencias, construyendo intuiciones**. ***Learning construction through challenges: awakening consciences, building intuitions***. Barrios-Padura, Ángela; Jiménez-Expósito, Rosa Ana; Serrano-Jiménez, Antonio José.

24. ***Transversality and Common Ground in Architecture, Design Thinking and Teaching Innovation***. Sádaba-Fernández, Juan.

25. **Metodología: "Aprender haciendo", aplicada al área de Construcciones Arquitectónicas*. Methodology: "Learning by doing", applied to the Architectural Constructions area***. Muñoz-González, Carmen M.; Ruiz-Jaramillo, Jonathan; Alba-Dorado, María Isabel; Joyanes Díaz, María Dolores.

26. **Matrioska docente: un experimento pedagógico en MACA ETSAM*. Teaching Matriosk: a pedagogical experiment at MACA ETSAM***. Coca-Leicher, José de; Mallo-Zurdo, María; Ruíz-Plaza, Ángela.

27. **¿Qué deberíamos enseñar? Reflexión en torno al Máster Habilitante en Arquitectura*. What should we teach? Reflection on the Professional Master of Architecture***. Coll-López, Jaime.

28. ***Hybrid actions into the landscape: in between art and architecture***. Lapayese, Concha; Arques, Francisco; De la O, Rodrigo.

29. **El Taller de Práctica: una oficina de arquitectura en el interior de la escuela*. The Practice Studio: an architecture office Inside the school***. Jara, Ana Eugenia; Pérez-de la Cruz, Elisa; Caralt, David.

30. **Héroes y Villanos*. Heroes and Villains***. Ruíz-Plaza, Ángela; Martín-Taibo, Leonor.

31. **Las ciudades y la memoria. Mecanismos de experimentación plástica en paisajes patrimoniales*. Cities and memory. Mechanisms of plastic experimentation in heritage landscapes***. Rodríguez-Fernández, Carlos; Fernández-Raga, Sagrario; Ramón-Cueto, Gemma.

32. ***Design Through Play: The Archispiel Experience***. Elvira, Juan; Paez, Roger.

33. **Del lenguaje básico de las formas a la estética de la experiencia*. From basic language of forms to aesthetics of experience***. Ríos-Vizcarra, Gonzalo; Coll-Pla, Sergio.

34. **Arquitectura y paisaje: un entorno para el aprendizaje transversal, creativo y estratégico*. Architecture and landscape: a cross-cutting, strategic, and creative learning environment***. Latasa-Zaballos, Itxaro; Gainza-BarrencuA, Joseba.

35. **Re-antropizar el paisaje abandonado*. Re-anthropizing abandoned landscapes***. Alonso-Rohner, Evelyn; Sosa Díaz- Saavedra, José Antonio.

36. **Mi taller es el barrio*. The Neighborhood is my Studio***. Durán Calisto, Ana María; Van Sluys, Christine.

37. **Arquitectura en directo, Aprendizaje compartido*. Live architecture, shared learning***. Pérez-Barreiro, Sara; Villalobos-Alonso, Daniel; López-del Río, Alberto.

38. **Boletín Proyecta: herramienta, archivo y registro docente**. ***Proyecta Bulletin: tool, archive and educational record***. Domingo-Santos, Juan; García-Píriz, Tomás; Moreno-Álvarez, Carmen.

39. **La Plurisensorialidad en la Enseñanza de la Arquitectura**. ***The Plurisensoriality in the Teaching of Architecture***. Guerrero-Pérez, Roberto Enrique; Molina-Burgos, Francisco Javier; Uribe-Valdés, Javiera Ignacia.

40. **Versiones Beta. El prototipado como herramienta de aprendizaje**. ***Beta versions. Protoyping as a learning tool***. Soriano-Peláez, Federico; Colmenares-Vilata, Silvia; Gil-Lopesino, Eva; Castillo-Vinuesa, Eduardo.

41. **Enseñando a ser arquitecto/a. Iniciación al aprendizaje del proyecto arquitectónico**. ***Teaching to be an architect. Introduction to the architectural project learning***. Alba-Dorado, María Isabel.

42. **Arquitectura y conflicto en Ahmedabad, India. Docencia más allá de los cuerpos normados**. ***Architecture and conflict in Ahmedabad, India. Teaching beyond normative bodies***. Cano-Ciborro, Víctor.

43. **Agua y ciudadanía: Estrategia Didáctica para la formación en contextos de cambio climático**. ***Water and citizenship: didactic strategy for training in climate change scenarios***. Chandia-Jaure, Rosa; Godoy-Donoso, Daniela.

44. **Las TIC como apoyo al desarrollo de pensamiento creativo en la docencia de la arquitectura**. ***ICT as support for the development of creative thinking in the teaching of architecture***. Alba-Dorado, María Isabel; Muñoz-González, Carmen María; Joyanes-Díaz, María Dolores; Jiménez-Morales, Eduardo.

45. **Taller de Barrio. Prototipo de taller de oficio como caso de vínculo multidireccional con el medio**. ***Taller de Barrio. Prototype for a craft workshop as case of multidirectional academic outreach***. Araneda-Gutiérrez, Claudio; Ascuí-Fernández, Hernán; Azócar-Ulloa, Ricardo; Catrón-Lazo, Carolina.

46. ***Building the City Now!: Towards a Pedagogy for Transdisciplinary Urban Design.*** Massip-Bosch, Enric; Sezneva, Olga.

47. **Dinámicas participativas y multidisciplinariedad en proyectos docentes de regeneración urbana**. ***Participatory dynamics and multidisciplinareidad in urban regeneration teaching projects***. Portalés Mañanós, Ana; Sosa Espinosa, Asenet; Palomares Figueres, Maite.

48. **Taller de proyectos II: aprender haciendo a través del espacio de la experiencia**. ***Taller de proyectos II: learning by doing through experience space***. Uribe-Lemarie, Natalia.

49. ***Experimentation, Prototyping and Digital Technologies towards 1:1 in architectural education***. Dubor, Alexandre; Marengo, Mathilde; Ros-Fernández, Pablo.

50. **Aprender construcción analizando fotografías de edificios**. ***Learning Construction by Analyzing Photographs of Buildings***. Fontàs-Serrat, Joan; Estebanell-Minguell, Meritxell.

51. **Microarquitecturas super abstractas. Jugando con tizas, pensando arquitectura con las manos**. ***Super abstract micro architectures. Playing with chalk, thinking arquitectura with hands***. Alonso-García, Eusebio; Zelli, Flavia.

52. **Incorporación del blended learning al taller de proyectos arquitectónicos**. ***Incorporating blended learning to the architectural design-studio***. Nicolau-Corbacho, Alberto; Verdú-Vázquez, Amparo; Gil-López, Tomás.

53. **El proyecto arquitectónico en paisajes patrimoniales: una experiencia de inmersión internacional**. ***Architectural project in heritage landscapes: an international immersion experience***. Fernández-Raga, Sagrario; Rodríguez-Fernández, Carlos; Fernández-Villalobos, Nieves; Zelli, Flavia.

54. **Retrato hablado del pasado. Un documento social de Taller de Barrios**. ***Spoken portrait of the past. A Taller de Barrios social document***. Sáez-Gutiérrez, Nicolás; Burdíles-Cisterna, Carmen Gloria; Lagos-Vergara, Rodrigo; Maureira-Ibarra, Luis Felipe.

55. **Las revistas de arquitectura. Una herramienta para la docencia en Historia de la Arquitectura**. ***The architecture magazines. A tool for teaching in Architecture History***. Palomares Figueres, Maite; Iborra Bernad, Federico.

56. **El detalle constructivo como expresión multiescalar de la forma**. ***The constructive detail as a multi-scale expression of the form***. Ortega Culaciati, Valentina.

57. **La historia de la arquitectura y la restauración en el siglo XXI: utilidad y reflexiones**. ***The History of Architecture and the Restoration in the 21st century: utility and reflections***. La Spina, Vincenzina; Iborra Bernard, Federico.

58. **Aprendizaje activo en Urbanismo: aproximación global desde una formación local**. ***Active learning in Urbanism: global approach from a local learning***. Soto Caro, Marcela; Barrientos Díaz, Macarena.
59. **UNI-Health, Programa Europeo de Innovación Educativa para la Salud Urbana**. ***UNI-Health, European Innovative Education Program for Urban Health***. Pozo-Menéndez, Elisa; Gallego-Gamazo, Cristina; Román-López, Emilia; Higueras-García, Ester.

60. **Taller de Barrio. Innovación pedagógica a través de alianzas tripartitas**. ***Taller de Barrio. Pedagogical innovation through threefold alliances***. Araneda-Gutiérrez, Claudio; Burdiles-Allende, Roberto; Reyes-Pérez, Soledad, Valassina-Simonetta, Flavio.

61. **El taller de arquitectura más allá del enfoque tradicional de Donald Schön**. ***The architecture studio beyond Donald Schön´s traditional approach***. Arentsen-Morales, Eric.

62. **La construcción del Centro Social de Cañada Real como medio de formación e integración**. ***The construction of Cañada Real Social Center as instrument for training and integration***. Paz Núñez-Martí; Roberto Goycoolea-Prado.

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Building the City Now!: Towards a Pedagogy for Transdisciplinary Urban Design

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Abstract
This paper presents and discusses the unique experience of a training program in urban design, directed by the authors, which facilitated an exchange, integration and new advancement of the pedagogy and knowledge of diverse fields concerned with the city: Building The City Now! A joint effort between Catalan architects and Russian academia and businesses with support from European experts, BCNow!'s first edition became a training ground for fifteen Russian professionals and activists from diverse backgrounds in Saint Petersburg in 2014-2015 seeking to explore an alternative understanding of the city and its production in their practices. Based on the idea of transdisciplinarity, the program was developed with a hands-on approach. This paper reflects on the experience and lessons from BCNow! contextualizing it in the existing traditions of urban thinking, discusses the idea of transdisciplinarity by relating it to comparable experiences, and zooms onto the specifics of the curriculum providing concrete illustrations of the training and its outcomes.

Keywords: *experimental pedagogy, urban design, transdisciplinarity, professional training.*

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Introduction: Building the City Now!

This paper discusses a unique experience of devising and implementing a training program in urban design, Building The City Now! (BCNow!), created and directed by the authors. A collaboration between Catalan architects and Russian academics, activists and businesses, with support from European experts, BCNow! is a prototype for an alternative pedagogical approach to transforming the city. It offers a unique methodology for learning and an exchange of tools between and across different professions and backgrounds, aiming at overcoming disciplinary boundaries, social prejudice and individual experiences, which more often than not function as limitations, turning them into points of discussion and research.

This paper reflects on the experience and lessons from BCNow! by first contextualizing it in the existing intellectual traditions of thinking about urban space and design in architectural, urban and social theory. It then discusses its main topics of transdisciplinarity and its project-oriented, hands-on pedagogy based on the workshop model, contrasting it with similar programs in architectural training. Finally, addresses its specific implementation in its first edition, which became a training ground for fifteen Russian professionals from diverse backgrounds in St. Petersburg, Russia, in 2014-2015. The paper reviews the curriculum providing concrete illustrations of the training and its outcomes, drawing conclusions from the first edition of this experimental course.

1. Urban Thinking & Doing: An Overview

The past half-a-century of theorizing and designing cities witnessed a radical shift in the top-down planning directives stemming from modernism and the interventionist social engineering mediated by architecture, oriented towards the expedited auto-mobility, rule of experts, business-friendly policy regulations, and the nature-city oppositional thinking (Le Corbusier 1929, Holston 1987, Forester 1988). With the publication of Jane Jacobs engaged work emphasizing spontaneity, self-organization and self-regulation, and the inclusion of the strange as well as the poor, a bottom-up, lived and participatory ethos of urbanism prevailed (Jacobs 1961).

This activist perspective was rationalized as a movement countering the professionalization of urban decision-making in influential writer-architects like Christopher Alexander (Alexander 1977), urban theorist Henri Lefebvre (Lefebvre 1970) and movements such as Situationists International (Guy, E. & Le Bras, L. 2012). The importance of inclusive public space, of personal and social experience, collective histories and memory; the mobility safety and diversification, accessibility; and finally, social and ecological sustainability, informed new visions of the city (Sennett 1970, 2006; Gehl 1971, 2010).

In these visions, the ‘know-how’ has been democratized and a whole range of ‘ways-of-knowing’ came to play. They gave impetus to participatory design, which has been increasingly incorporated in urban development. The case of Barcelona is very clear in this respect, following a line that starts with the analysis of social movements by Manuel Castells or Jordi Borja (Castells 1974; Borja 1975, 1998) to the recent contributions of architects like Zaida Muxí (Muxí 2011) and Itziar Gonzàlez, developing a concrete participatory praxis that has found a resonance in the ways that the City of Barcelona and its Metropolitan Region operate of late.

Furthermore, the notion that the city is itself a source of information (Kitchin 2014) which, given the right conditions, can be used by citizens to exercise their “right to the city” (Harvey 2003;

Smith et al. 2016), formed the base of the Senseable City Lab at MIT, aimed at exploring the implications at the urban scale of new technologies and how to best use all data produced in a city (Ratti 2004).

These advances in knowledge notwithstanding, an approach which incorporates these ideas and values in educational practice has been slow to develop. Some efforts have been made, and at an institutional level it is worth mentioning the UN Global Compact Cities Programme, which has developed training tools for participatory design (Galán 2015). Several universities have set in motion interdepartmental programmes aiming at an inclusive approach to urban design, but their academic nature and the usual requisites for entry make them relatively isolated from the pulses of the city and its inhabitants.

BCNow! is a response and continuation of these efforts put in educational practice in an open, non-conventional academic milieu. It brings together the social and the architectural in a different framework, in two distinct ways. On one hand, the program advances not an integrative but a synergistic transdisciplinary approach to urban design. On the other, it is task- and urban territory-oriented, favoring a direct relationship with actual design, regardless of the abilities or background of their participants, thus dissolving professional boundaries.

2. BCNow! and transdisciplinarity

Although interdisciplinarity is currently in fashion, it is often practiced as a simple interaction among professionals from different fields, who complement each other as experts in partial aspects of design. Their coming together does not transform disciplinary points of view, but utilizes them together in a single vision.

Transdisciplinarity as fostered in BCNow!’s curriculum is different. It aims at stirring a collective debate across the professional divide and the differences in educational background. These differences in expertise and experience are not merely cancelled, however. They all serve in the achievement of one paramount goal: building a livable city.

An pertinent example of this kind of cooperation might be the Escape Room, in which a group of people have to downplay about their individual differences, hierarchical status and specific expertise in order to find a solution to the problem: finding the exit from the room. In an Escape Room, leadership, coordination and skills are spontaneously created and brought out. This model informs, to an extent, the BCNow!

Certainly, the case of urban design is far more complex than that, but central to it is a similar ethos: to forget about 'discipline', that is, to go beyond the specialized knowledge -- but not by forgetting but utilizing that which is pertinent. Although they never worked together, students and teachers have a common goal and all have to contribute to its final accomplishment via critical thinking, teamwork and shared problem-solving.

Current compartmented knowledge enshrined in universities doesn’t allow for this type of mix of students and visions to be implemented in the mainstream courses. Similar approaches can only be found in post professional training programs calling for students from different fields, but always with some sort of access restrictions.

BCNow gradually and pointedly dissolves the expertise and its hierarchical social standing in order to generate a conversation across all participants. It does so by moving beyond professional roles through personal knowledge by implementing as its core teaching practice the Workshop and its hands-on approach.

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3. BCNow! and the workshop model

Following Bruno Latour's motto, BCNow! bases its pedagogy in the "laboratory to raise the world" (Latour 1982), drawing from the interdepartmental and hands-on experiences that its professors have developed both at Escola del Vallès-UPC and Universiteit van Amsterdam. The workshop model is certainly a well-established methodology in architectural and urban design schools worldwide. In polytechnic schools in Southern Europe like those at UPC, the School of Seville or the Politecnico di Milano, it is the norm. The workshop model is also widely used in participatory design, albeit with limitations induced by the lack of a common ground or differences in abilities.

BCNow! workshops are aimed towards creating a common ground in which students bring together their different visions and backgrounds and collaborate as a team. These workshops are combined with, and supported by, theoretical and field-research training, which comes from social sciences, history, and the environmental science. The course is geared towards three key sets of skills: (1) Problem definition = theory (from social to architectural); (2) Information gathering = research & analysis (specialized methodologies), (3) Information processing and problem solving = synthesis (results). They are oriented toward building an operative knowledge of urban reality by promoting a holistic view on the urban situation, and construct a critical, reflexive understanding of urbanism.

By replicating in a single, integrated setting what is going on in the professional world, students learn to understand locations' shortcomings and opportunities, to put them in a broader context, and to understand their societal and cultural significance and value. This model facilitates learning: mixed teams of 4-6 members each, working simultaneously on several types of analysis and assessments have the benefit of constructing a common language and learning about each other's abilities in a realistic set-up geared towards the resolution of actually existing issues. Their education goal is to cultivate a 'complex systems perspective' on the city. Below we offer an overview of the structure, contents and the methods of training used in BCNow! and support them with illustrations.

4. BCNow! in St. Petersburg: from local to worldwide

BCNow! as a learning and training program was first developed for the city of Saint Petersburg, a Russian metropolis of nearly 5 million people in constant growth. It is mono-centric, a legacy of the Soviet period; it is sprawling, with a underserviced, poorly connected, yet rapidly forming, periphery; it is marked by immigration and its related increasing cultural diversity; it faces staggering income inequalities; and it is a world renowned historic city. In short, while remaining distinctly Russian and formerly socialist, St. Petersburg also represents many of the current global trends. To use the distinction introduced by urban theorist Neil Brenner, St. Petersburg is "stereotypical" i.e. generic, and "archetypical," i.e. unique, at once (Brenner 2003).

The research and teaching methodology of BCNow! builds upon and expresses this duality common to many major urban centers. The curriculum is organized around four main domains expressed in the basic equation of classical terms applicable to the city as a general phenomenon. They form the backbone of the theory lessons complementing the workshops:

OIKOS		the physical support – THE TERRITORY/PLACE
URBS		the anatomy – THE FORM
CIVITAS		the physiology – THE SOCIETY
DYNAMICS		fluxes and flows – THE PROCESSES
_____	+	_____
POLIS		THE CITY

Theory, research, analysis and synthesis are broadly conceived and range in BCNow! from social to architectural theory, and back again; from methods of research involving human participants to those of design and planning; and the integration and application of the previous steps into a concrete result that involves social-sciences and architecture. The approach is such that knowledge about urban issues is taken from, and can be applied to, cases worldwide.

At the same time, BCNow! is attentive to the unique features of St. Petersburg. There are two ways in which specificity is manifested in the curriculum: the case/territory oriented pedagogy, and the incorporation of local social researchers into the teaching team. The first means that specific areas of St. Petersburg for students to work with are selected following the principle of representativeness of more general trends, but are 'translated' into 'local' realizations. For example, public places, the Soviet 'microrayon', industrial zones, and of course, the historic centre of the city are place-specific 'situations' of more global 'scripts' of the growing privatization, post-industrial decline, and mass tourism. To ensure that local specificity is not lost, but firmly incorporated, the cooperation between Barcelona-based architects and St. Petersburg-based social researchers was built into BCNow!'s curriculum. Together, they ensured that goals, methods, and contents of BCNow! are grounded in local realities, while remaining generally relevant.

5. BCNow!'s organizational structure

BCNow! is a post-professional 2-semester, 60-ECTS course accredited by UPC-BarcelonaTECH as a Master Degree in Urban Design & Research. Its first edition in Saint Petersburg was implemented in collaboration with the Institute of Urbanism SREDA. Fifteen students were selected from among urban planners, architects, public administrators, activists and the graduates of social science and humanities departments. (Fig.1)

Fig. 1: BCNow! Presentation, Saint Petersburg, 29.06.2014. Source: BCNow!

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Nearly all of the students were employed full-time. The schedule was devised to accommodate the needs of their professional work. Classes were divided between training in the conceptual work, which sensitized them towards social issues (inequality and its expression in urban space, the relationship between place, memory and identity), and the methods for researching urban communities, their economies and politics. Knowledge acquired in these sessions was used in the Studios, led by an architecture professor. The BaseCamp online platform was the main means of communication, as well as a place for gathering information, systematizing course materials and providing students with feedback from professors. All learning setting had a focus on 'how to' – not on 'what', and on how to work with and around the common idea, frequent among professionals, that some ideas or actions are 'impossible' to implement because of a given condition.

6. BCNow! program description

BCNow!'s program is organized as six thematically and conceptually defined blocks called 'Workshops' (WSH), during which students take up an urban territory representative of a distinct urban issue and/or dynamic. In the first semester, four shorter 4-week workshops focus on key conceptual issues foundational to BCNow! They provide students with tools for researching and designing urban territories. In the second semester, two 8-week workshops integrate the learned tools and perspectives by requiring students to focus on more complex territories and tasks. Teams of students are formed differently for each workshop to develop and present during the Finals the original research-based designs.

In St. Petersburg the Program opened with WSH 1A 'Our Public Space: Enjoying the threshold'. By exploring, theoretically and practically, through research and analysis, issues of privacy and publicity central to any city, as well as its layered nature, WSH1A established an understanding of the relationship between the integral approach and the integrated nature of the city. It also fostered transdisciplinarity among students building the foundations for their future team-work.

The first semester was planned to gradually zoom out from the small scale to larger urban aspects. Such methodology, incorporating successive layers of complexity, allows for a more direct connection of the students with the city reality, while facilitating the necessary transdisciplinary team-building. In WSH 1B 'Updated Strategies for Microrayon' students redressed the notion of 'transformation' central to any intervention into the city by addressing its three key aspects: strategy, structure, and program. WSH 1B focused on the Soviet-period planning unit called *microrayon* and its transformative potential. As they visited, researched and observed life in and of microrayon, students continued to learn to work with the city as a successive addition of social and historical layers.

How to rehabilitate urban areas without destroying their social fabric? This question continued to inform WSH 1C. Taking the so-called 'obsolete space' as its object, the workshop introduces the concept of 'intensive' -as opposed to 'extensive'- development of the city. It worked with territories such as the waterfront, giving them new meaning and a new function. Similarly to WSH 1B, WSH 1C started with the existing reality and proceeded, through validation, to improving or changing them.

'Urban connections' was the organizing concept of WSH 1D. The territory in focus was the industrial belt. By bringing 'connections' and 'production' together as key concepts, the workshop trained students to approach the city as a system of rebalanced urban relations.

Specifically, it focused on ‘River-to-Port’ and ‘Center-to-Periphery’ relationships. A new centrality was introduced as a possibility for the city.

Upon completing 4 short workshops, students were equipped to undertake the task of designing at a more complex scale. To do so, WSH 2A and 2B addressed two main issues faced by a great majority of cities in the world: the use and preservation of the city’s historical core and mass housing.

WSH2A specifically targeted the challenge of preserving a historical layer while keeping a given urban territory in social use. Its title ‘Hermitage for the People’ expresses how the issue was approached in WSH 2A. Discussed at greater length below, WSH 2A was distinct in that it combined tools already tried out in the first semester with a new method of data-network articulation, involving citizens.

The final workshop addressed head on the problem of mass housing. Building tall and in a standardized way is a global tendency. The territory that BCNow! chose for its last workshop was an ultra-high density, *de facto* dormitory satellite town, a successor in some ways, but also an inferior version of the Soviet microrayon (WSH 1B). WSH 2B is an excellent example of how the concepts and materials of the 1st semester -the relationship between residence and public space, urban connectivity, centrality, and the value of the social fabric- can be integrated. In practice, WSH 2B activated and brought together students’ skills in researching social tissue, housing markets, and in activating urban fringes, gaps and obsolete areas. The workshop was mid-reviewed by Barcelona experts, and finally reviewed by officials of the City of Saint Petersburg. (Fig. 2)

Fig. 2: Left, BarcelonaTECH Professor Josep Parcerisa and Josep Acebillo, former Head Architect of the City of Barcelona in mid-review, 22.05.2015. Right, City of Saint Petersburg officials in final review, 20.06.2015. Source: BCNow!

7. A BCNow! example: Hermitage for the People-Transforming the Historic Center

We have chosen one of the workshop modules to illustrate the methodology, results and the application of BCNow!’s pedagogy and methods of training. WSH 2A took place as a 2-month studio in the second semester, building on the sinergies and experiences gathered in the first part of the master program. Led by BarcelonaTECH professor Quim Rosell and sociologist Galina Orlova, it focused on the transformation of the historic center of Saint Petersburg by means of temporary or low-key alterations capable of changing the perception that its inhabitants have of their own neighborhood. Active participation of citizens was included as part of the training program. (Fig. 3)

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Fig. 3: Professor Quim Rosell, students and citizens discussing in mid-review, 13.03.2015. Source: BCNow!

The workshop aimed specifically at fostering a vision of the city as a socio-historic outcome: diverse actions by multiple actors produce the different urban layers forming the city. This approach enhances a vision of the city as a dynamic process of which all citizens, to a greater or lesser extent, at a larger or smaller scale, are actors effectively transforming the city, and doing so continuously.

The case of the areas around the famed museum of Hermitage is especially compelling. On one hand, it is a powerful tourist attraction that puts a lot of pressure on the surrounding urban tissue but, as is, has very little relation with it and is incapable of becoming a beneficial force of transformation. On the other hand, the Hermitage and its area of influence, defined by the trident radiating from the adjacent Admiralty Building, impose their urban design of grand perspective rules, at a scale and character at odds with residential or civic life, effectively forming three residential sectors. (Fig. 4)

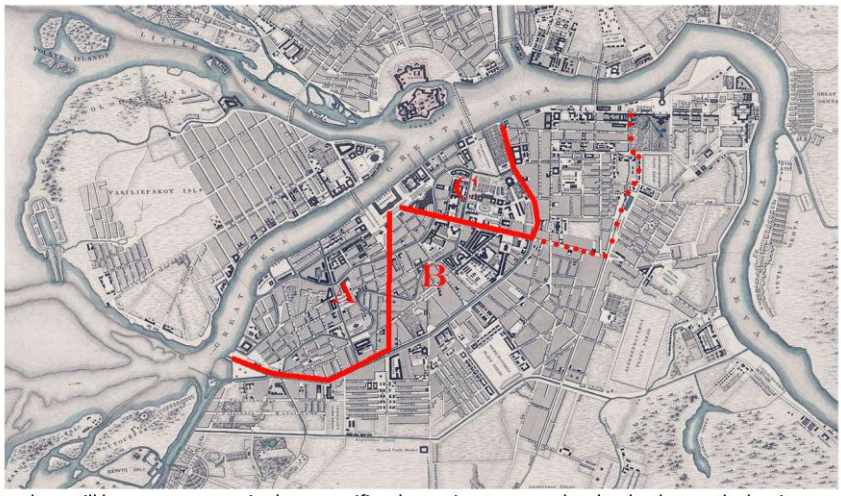

Fig. 4: Three sector defined by the trident of avenues converging at Admiralty Building. Source.BCNow!

The existing housing blocks within these sectors, though, still keep a small-scale and neighborly atmosphere, but are in a fragile equilibrium and under a constant threat of becoming gentrified. This workshop explored differences and similarities of the three urban sectors in order to discover the character of the present urban communities and find clues of how to proceed. Groups of students began by conducting field research leading to the identification of

shortcomings and opportunities offered by the three urban sectors, which were later worked out at the studio.

In order to advance transdisciplinarity, in this workshop we experimented with a different methodology compared to the previous modules. In the first part of the workshop three groups of students were formed, 2 composed solely by architects and 1 solely by non-architects, each group being responsible for bringing up different issues and information while pursuing the same goal: defining the right questions to address. The difference consisted in the instruments and the backgrounds of each group.

The two architects' groups had the mission to detect and trace two continuous and coherent urban routes through the assigned areas to serve as spines connecting different situations in the city center. They were asked to define precisely the physical limits of the intended work and the related key questions. The non-architecture group directed their efforts at detecting and bringing about community- and ecology-related urgent questions. Using their professional backgrounds, personal connections and the knowledge of the city, this group was responsible for involving specific social actors in the project. The group was also to delineate present and future social and economic scenarios and to map the conditions for them.

The second phase of WSH 2A proceeded with two mixed groups and two projects as two strategic labs, getting a comprehensive insight of the center of the city beyond the conventional problem-solving scenario. Emphasizing the idea that transformation can help preservation, the work focused on two distinct mid-scale schemes of significant interest. One was the Apraksyn-Gostinny premises hosting a large open-air market; the other a set of courtyards of the Golden Triangle, Kolomna and Galernaya neighborhoods. Both areas were understood as generators of powerful urban synergies capable to provide, from their very specificity, with mechanisms of preservation and transformation for the entirety of the city center. As a result of this work, students acquired an overall informed criteria and innovative design tools to articulate a discourse based on statements (why/ what) and ways (how) of intervening in it.

Involvement with citizens was seen as an imperative and was encouraged by using crowdfunding and co-operation digital applications such as goteo.org, specialized in services, infrastructure, and other microtask resourcing, fostering the development of autonomous creative and innovative initiatives contributing to the development of the commons, free knowledge and/or open source. This digital platform helped to refine the framing of the proposal, collecting voices from both local inhabitants and different types of community associations. Students interacted with inputs gathered online, managed their evolution, and regulated their impact in the design process, in order to develop a comprehensive proposal. The final result and a measure of the relevance of this workshop was its selection as a best-practice training program by the international committee organizing the Idea Camp 2015 "Build the City: Perspectives on Commons and Culture" in Botkyrka, Sweden.[1]

8. Conclusion

Designed as a build-up and expansion of students' skills and perspectives through a series of place-specific, task-oriented and research-grounded operations, BCNow! is a way to prepare versatile specialists who work with globally relevant trends and dynamics without losing the

[1] For further reference, see both the 2015 Idea Camp website (www.culturalfoundation.eu/idea-camp-2015), and the Presentation done by the student Elvira Gizatullina - OPEN AND CONNECT: www.youtube.com/watch?v=dhwqbcPJl48&list=PLQw7lVPqhSW-mY3DqX2w8kaV2C7zyaflx&index=42&t=0s

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connection to the local. It is oriented toward building an operative knowledge of urban reality, promoting a holistic view on the urban situation, which does not take conventional views for granted and constructs a critical, reflexive urbanism. BCNow! takes to heart the belief that there is no 'fixed set' of knowledge to be learnt or taught. Knowledge is not univocal, but bi-directional, and is a product of the shared effort. The objective, therefore, is to train students to define goals, select appropriate tools, ask questions and find solutions.

BCNow! aims at constructing a teaching methodology capable to incorporate participants from different backgrounds and to address different urban realities. In Its first implementation in Saint Petersburg it focused on the specificities of the city, its urban situation, and its professional milieu, but it also used the city in a stereotypical way, as a collection of manifestations of trends and dynamics which define cities worldwide.

Our experience in St. Petersburg demonstrates, first, that the boundary dividing social research from architectural practice is not as solid as often assumed, but porous and can be productively and non-hierarchically overcome in the design process. In a right setting, like the one offered by BCNow!, a mutual complementarity is enhanced and embraced by students. The synergy is extraordinary, as illustrated by the example offered in the paper, the WSH 2A. Second, the hands-on transdisciplinary approach with a focus on a specific territory and an open-ended set of goals leads to an immersion and a deeper understanding of the urban reality. This, however, does not imply a loss of a practical orientation. Quite the opposite, we saw history- and social fabric-sensitive design solutions that students offered, and changes in their own perceptions of the construction of the city. Finally, the program was effective in training students to gather, discuss and elaborate information and to communicate their ideas to a diverse audience, which included city administrators, politicians and the general public.

The results of the first edition of BCNow have been totally satisfactory. This was evidenced in two course evaluations conducted at the end of each semester, and by the enhanced employability that students have enjoyed since finishing the course. It was also supported by the selection of a proposal and the invitation of the BCNow! students team to the Idea Camp 2015, an incubator workshop for the most creative and daring ideas from across Europe and neighboring countries like Russia. Twenty-five of these proposals were selected to receive Research & Development grants in order to implement their projects in the actual urban context where they stem from, including the one from BCNow!. We take it to be a recognition of the unique pedagogy and its effectiveness by the international community of urbanists.

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