

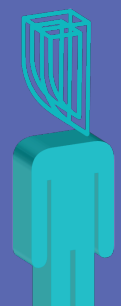
livro de atas

proceedings

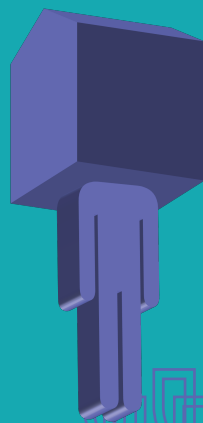
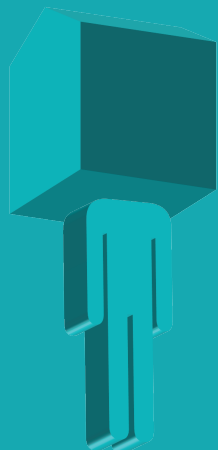
V Encontro Internacional  
de **Formação na Docência**

5th International Conference  
on **Teacher Education**

**incte'20**  
international  
conference on  
teacher education

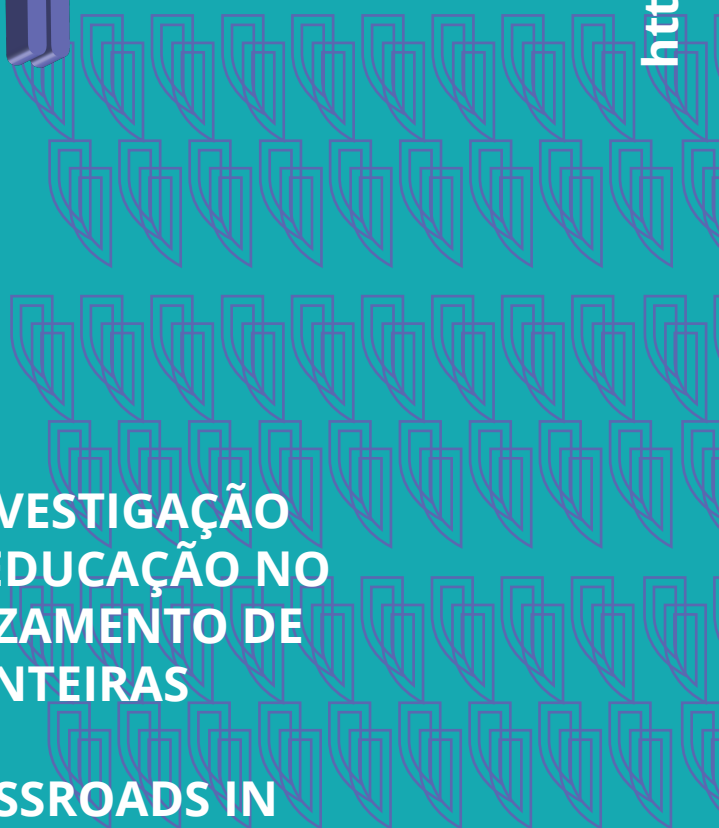


<http://incte.ipb.pt/>

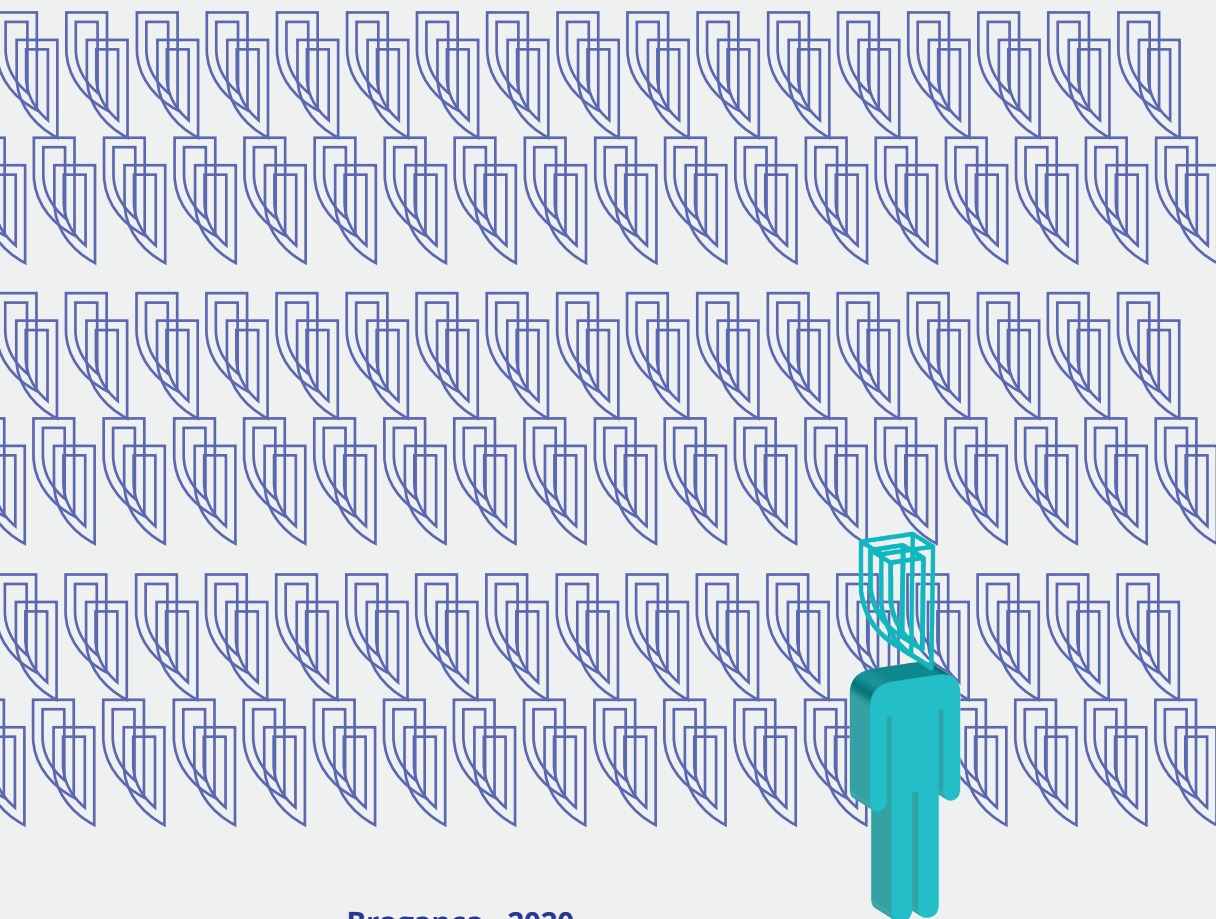


**A INVESTIGAÇÃO  
EM EDUCAÇÃO NO  
CRUZAMENTO DE  
FRONTEIRAS**

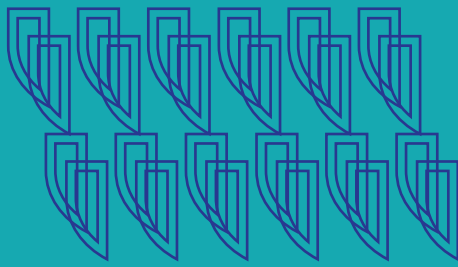
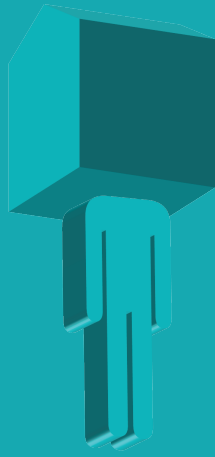
**CROSSROADS IN  
EDUCATIONAL  
RESEARCH**



**incte'20**  
international  
conference on  
teacher education



**Bragança . 2020**



**Título | Title**

V Encontro Internacional de Formação  
na Docência | Livro de Atas

5th International Conference  
on Teacher Education | Proceedings

**Editores | Editors**

Rui Pedro Lopes, Cristina Mesquita, Elisabete Mendes Silva, Manuel Vara Pires | Instituto Politécnico de Bragança

**Edição de Comunicação e Design | Communication and Design Edition**

Jacinta Costa & Carlos Casimiro da Costa | Instituto Politécnico de Bragança

**Publicação | Publisher**

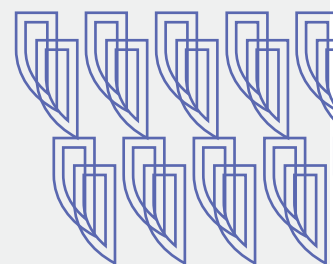
IPB | Instituto Politécnico de Bragança

**Morada | Address**

Escola Superior de Educação de Bragança  
Campus de Santa Apolónia  
5300-253 Bragança . Portugal  
<http://incte.ipb.pt/>  
[incte@ipb.pt](mailto:incte@ipb.pt)

**ISBN + Handle**

978-972-745-276-7 | <http://hdl.handle.net/10198/20081>



### Presidência da Comissão Organizadora | Conference Chairs

Cristina Mesquita | Instituto Politécnico de Bragança, Portugal

Elisabete Mendes Silva | Instituto Politécnico de Bragança, Portugal

Mário Cardoso | Instituto Politécnico de Bragança, Portugal

### Comissão Organizadora | Organising committee

Adorinda Gonçalves | IPB, Portugal

Angelina Sanches | IPB, Portugal

Jacinta Costa | IPB, Portugal

Luís Castanheira | IPB, Portugal

Manuel Vara Pires | IPB, Portugal

Maria do Céu Ribeiro | IPB, Portugal

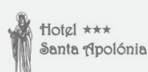
Paula Vaz | IPB, Portugal

Rui Pedro Lopes | IPB, Portugal

### Organizado por | Organised by



### Apoios | Sponsors

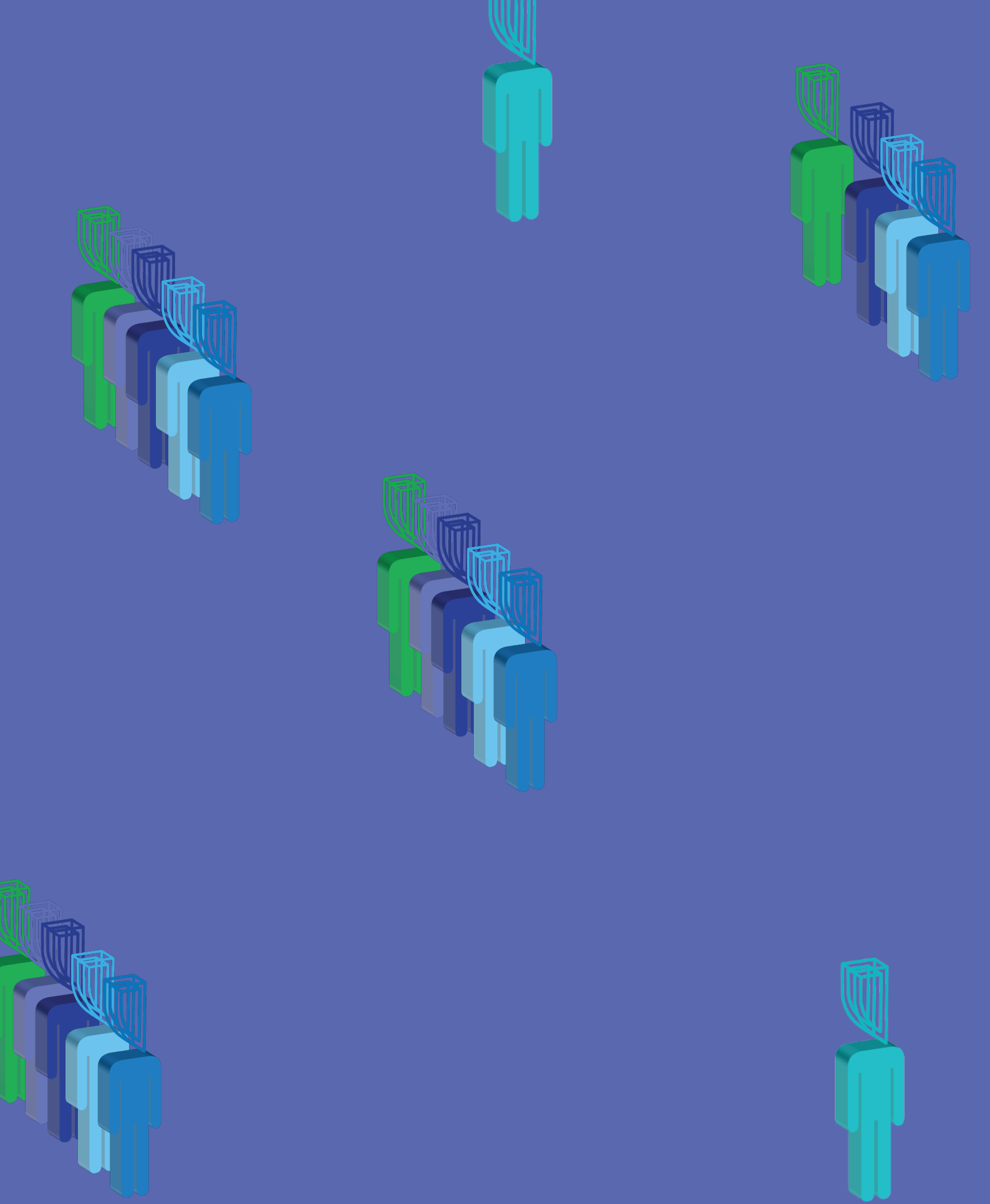


## Comissão científica | Scientific committee

Adorinda Gonçalves (IPB, Portugal)  
Alexandra Soares Rodrigues (IPB, Portugal)  
Alexia Dotras Bravo (IPB, Portugal)  
Amélia Marchão (IPPortalegre, Portugal)  
Ana Garcia Valcárcel (USAL, Espanha)  
Ana Paula Aires (UTAD, Portugal)  
Ana Paula Laborinho (FEA, Portugal)  
Ana Paula Martins (UMinho, Portugal)  
Angelina Sanches (IPB, Portugal)  
António Guerreiro (UALgarve, Portugal)  
António Nóvoa (ULisboa, Portugal)  
António Vasconcelos (IPS, Portugal)  
Ariana Cosme (UPorto, Portugal)  
Assunção Folque (UEvora, Portugal)  
Carla Araújo (IPB, Portugal)  
Carla Guerreiro (IPB, Portugal)  
Carlos Neto (ULisboa, Portugal)  
Carlos Teixeira (IPB, Portugal)  
Catarina Vasques (IPB, Portugal)  
Chee Hoo Lum (NIENTU, Singapura)  
Christine Pascal (CREC, Reino Unido)  
Cláudia Martins (IPB, Portugal)  
Cristina Martins (IPB, Portugal)  
Cristina Mesquita (IPB, Portugal)  
Daniela Gonçalves (ESEPF, Portugal)  
Delmina Pires (IPB, Portugal)  
Domingos Fernandes (ULisboa, Portugal)  
Eduardo Lopes (UEvora, Portugal)  
Elisabete Mendes Silva (IPB, Portugal)  
Elza Mesquita (IPB, Portugal)  
Evangelina Bonifácio (IPB, Portugal)  
Feliciano Henriques Veiga (ULisboa, Portugal)  
Fernando Martins (IPC, Portugal)  
Flávia Vieira (UMinho, Portugal)  
Gabriela Portugal (UAveiro, Portugal)  
Gianina Ana-Massari (UAICDlasi, Roménia)  
Graça Santos (IPB, Portugal)  
Haroldo Bentes (IF do Pará, Brasil)  
Helena Rocha (UNova, Portugal)  
Henrique Teixeira-Gil (IPCB, Portugal)  
Ilda Ribeiro (IPB, Portugal)  
Isabel Cabrita (UAveiro, Portugal)  
Isabel Chumbo (IPB, Portugal)  
Isabel Vale (IPVC, Portugal)  
Isolina Oliveira (UAberta, Portugal)  
Jacinta Costa (IPB, Portugal)  
João Carvalho Sousa (IPB, Portugal)  
João Cristiano Cunha (IPB, Portugal)  
João Formosinho (UMinho, Portugal)  
Joaquim Machado (UCP, Portugal)  
Jorge Ramos do Ó (ULisboa, Portugal)  
José Manuel Belo (UTAD, Portugal)  
Juan-Carlos Beltrán (USAL, Espanha)  
Juan R. Coca (UVal, Espanha)  
Juan Gavilán (UConcépcion, Chile)  
Juha Lahtinen (TAMK, Finlândia)  
Júlia Oliveira-Formosinho (UCP, Portugal)  
Leoncio Vega-Gil (USAL, Espanha)

Leonor Santos (ULisboa, Portugal)  
Lina Fonseca (IPVC, Portugal)  
Lourdes Montero (USC, Espanha)  
Luciana Pereira (IPB, Portugal)  
Luís Castanheira (IPB, Portugal)  
Luís Menezes (IPV, Portugal)  
Luís Sebastião (UEvora, Portugal)  
Luisa Panichi (UPisa, Itália)  
Manuel Meirinhos (IPB, Portugal)  
Manuel Vara Pires (IPB, Portugal)  
Maria Antónia Mezquita (UValladolid, Espanha)  
Maria Assunção Flores (UMinho, Portugal)  
Maria da Conceição Martins (IPB, Portugal)  
Maria do Céu Ribeiro (IPB, Portugal)  
Maria do Céu Roldão (UCP, Portugal)  
Maria do Nascimento Mateus (IPB, Portugal)  
María Dolores Alonso-Cortés (ULEón, Espanha)  
Maria Isabel Castro (IPB, Portugal)  
Maria João Cardona (IPSantarém, Portugal)  
Maria José Rodrigues (IPB, Portugal)  
Maria Raquel Patrício (IPB, Portugal)  
Marília Castro Cid (UEvora, Portugal)  
Mário Cardoso (IPB, Portugal)  
Maja Ljubetic (USplit, Croácia)  
Mark Daubney (ILeiria, Portugal)  
Marta Saracho Aranaíz (IPP, Portugal)  
Miguel Ángel Santos Guerra (UMálaga, Espanha)  
Miguel Ribeiro (UniCamp, Brasil)  
Nélia Amado (UALgarve, Portugal)  
Neusa Branco (IPSantarém, Portugal)  
Olga Santos (IPLeiria, Portugal)  
Paula Barros (IPB, Portugal)  
Paula Vaz (IPB, Portugal)  
Paulo Afonso (IPCB, Portugal)  
Pedro Mucharreira (ULisboa, Portugal)  
Pedro Tadeu (IPG, Portugal)  
Pilar Gútiéz Cuevas (UCMadrid, Espanha)  
Rosa Novo (IPB, Portugal)  
Rui Pedro Lopes (IPB, Portugal)  
Rui Trindade (UPorto, Portugal)  
Rui Vieira (UAveiro, Portugal)  
Sandie Mourão (UNova, Portugal)  
Sandra Regina Soares (UNEB, Brasil)  
Sandra Santos (IPB, Portugal)  
Sani Rutz da Silva (UTFPR, Brasil)  
Sara Barros Araújo (IPP, Portugal)  
Sofia Bergano (IPB, Portugal)  
Sónia Galinha (IPSantarém, Portugal)  
Susana Carreira (UALg, Portugal)  
Susana Colaço (IPSantarém, Portugal)  
Tatjana Devjak (ULubljana, Eslovénia)  
Tony Bertram (CREC, Reino Unido)  
Vitor Gonçalves (IPB, Portugal)  
Vitor Hugo Manzke (IFSul, Brasil)







# Índice

## INCTE 2020 – V Encontro Internacional de Formação na Docência

<b>Nota de abertura</b> .....	1
A investigação em educação no cruzamento de (todas as) fronteiras..... <i>Rui Pedro Lopes, Cristina Mesquita, Elisabete Mendes Silva, Manuel Vara Pires</i>	3
<b>Currículo e Formação de Educadores e Professores</b> .....	7
A algebrização curricular nos anos iniciais do ensino fundamental no Brasil..... <i>Vera Cristina de Quadros, Susana Carreira</i>	9
A emergência de referenciais de competências para a capacitação digital docente .....	20
<i>Ana Cláudia Loureiro, Manuel Meirinhos, António José Osório</i>	
A relação entre globalização, comunicação e perspectiva bilíngue das escolas da atualidade ....	31
<i>Carolina de Freitas, Vitor Gonçalves</i>	
Acceso a la formación inicial docente en España y Portugal: estudio comparado .....	42
<i>David Revesado Carballares, Eva García Redondo, Víctor González López</i>	
Comunidade educadora: a proposta de educação integral de uma escola pública .....	51
<i>Ilda Renata da Silva Agliardi, Elisete Enir Bernardi Garcia</i>	
De-constructing dominant narratives in inclusive education: new perspectives on teacher education .....	60
<i>Gabriella D'Aprile, Giambattista Bufalino</i>	
Discapacidad intelectual en educación superior: necesidades formativas de los profesores universitarios .....	72
<i>Miguel Corbí, Lidia Bueno-Sánchez, María Teresa Ortega</i>	
Evasão no curso de pedagogia a distância UAB/UFAL: fatores evidenciados .....	82
<i>Maria da Conceição Valença da Silva, Débora Cristina Massetto, Maria Aparecida Pereira Viana</i>	
Flexibilidade na comparação multiplicativa: desafio para a formação de professores de matemática .....	91
<i>Graça Cebola, Joana Brocardo</i>	
Formação continuada de professores: uma revisão sistemática das publicações brasileiras .....	102
<i>Cristiane de Fatima Budek Dias, Caroline Subirá Pereira, Guataçara dos Santos Junior, Cristina Mesquita, Rui Pedro Lopes</i>	
Global English awareness: experiencia de comunicación intercultural en el aula de inglés .....	115
<i>Lucía Muñoz</i>	
Habitus e formação docente .....	125
<i>Mara Lúcia Rodrigues Costa, Tatiane de Paula Paulino, Ana Paula Martins Corrêa Bovo, Carla Maria Nogueira de Carvalho</i>	

Interdisciplinaridade na formação de professores: uma experiência através de uma disciplina interdepartamental . . . . .	136
<i>Lisiane Araujo Pinheiro, Neusa Massoni</i>	
La relevancia curricular de la educación para el desarrollo sostenible . . . . .	148
<i>Almudena Alonso-Centeno, Delfín Ortega-Sánchez</i>	
Literatura para a infância: importância do contacto das crianças com o livro . . . . .	158
<i>Joana Renca, Elza Mesquita, Carla Guerreiro</i>	
Moral e ética na educação global: modelo de Ellström e o Ubuntu . . . . .	170
<i>Marisa Batista</i>	
Perceção de estagiários de medicina sobre a relação professor-aluno na prática profissional . . . . .	182
<i>Vinicius Lopes Marinho, Nélia Amado</i>	
Pressupostos educacionais oriundos da filosofia com crianças: representações de docentes e discentes . . . . .	192
<i>Catarina Gonçalves, Daniela Gonçalves</i>	
TIC y discapacidad: barreras en la formación docente en Ceuta y Melilla (España) . . . . .	200
<i>José María Fernández Batanero, Pedro Tadeu, José Fernández Cerero</i>	
Uma investigação da formação em empreendedorismo de docentes no ensino fundamental . . . . .	211
<i>Eliane Maria Morriesen, Juliane Retko Urban, Antonio Carlos Frasson</i>	
<b>Didática e Formação de Educadores e Professores . . . . .</b>	<b>223</b>
A programação e a interdisciplinaridade numa escola do 1.º CEB em Portugal . . . . .	225
<i>Pedro Tadeu, Ana Pereira, Carlos Brigas, José Fernández Cerero</i>	
Articulando o português e a matemática através da literatura para a infância . . . . .	236
<i>Luís Menezes, Dulce Melão</i>	
Body and learning: the embodied reading experience of reading body laboratory . . . . .	249
<i>Alessandra Lo Piccolo, Marta Mingrino</i>	
Desenvolver capacidades de empatia no 1.º CEB: que estratégia? . . . . .	263
<i>Inês Pacheco, Carla Oliveira, Paula Flores, Dárida Fernandes</i>	
EGID3: percepções dos estudantes sobre o processo de avaliação . . . . .	274
<i>Marcela Seabra, Paula Maria Barros, Manuel Vara Pires, Cristina Martins</i>	
Implementation of a digital notepad for practicum in language teacher training . . . . .	286
<i>María Amor Barros-del Río, Beatriz Mediavilla-Martínez</i>	
La alianza Universidad-Escuela en la formación inicial docente . . . . .	293
<i>María Luisa García-Rodríguez</i>	
La evaluación de la competencia digital de los estudiantes como estrategia formativa . . . . .	304
<i>Marcos Cabezas-González, Sonia Casillas-Martín</i>	
Mejora del rendimiento en comprensión lectora: de la investigación a las aulas . . . . .	313
<i>Raúl Martínez, María Dolores Alonso-Cortés Fradejas, Raquel Couso, Ángel García, Ruth Vázquez, María Concepción Vega</i>	

Mestrado em pedagogia e didática: um desafio para a formação de professores . . . . .	324
<i>Edgar Manuel Ribeiro Lamas, Magali Freira Veríssimo, Estela Pinto Ribeiro Lamas</i>	
Metodología DigiCraft: aprender jugando es construir un futuro mejor . . . . .	336
<i>Sonia Casillas-Martín, Marcos Cabezas-González</i>	
O papel das atividades experimentais no processo de ensino-aprendizagem das ciências . . . . .	341
<i>Cátia Henrique, Tânia Pedro, Pedro Ribeiro Mucharreira, Helena Raposo, Paula Farinho</i>	
O uso de jogos nas aulas: percepções de alunos e professores . . . . .	351
<i>Ana Rita Ferreira, Manuel Vara Pires</i>	
Percepção de professores de um curso odontologia do seu papel no processo de ensino-aprendizagem . . . . .	363
<i>Vinicius Lopes Marinho, Camila Lemos Cunha, Jordana Ribeiro da Silva, Nélia Amado</i>	
Professores e a orquestração de atividades matemáticas com a plataforma Khan Academy . . . . .	372
<i>António Domingos, Ana Santiago, Ana Isabel Matos, Conceição Costa, Joana Castro, Paula Teixeira</i>	
Qualidade do ensino na licenciatura em educação básica: perspetivas dos/as estudantes . . . . .	383
<i>Graça Santos, Maria Raquel Patrício, Elza Mesquita</i>	
Realização de tarefas matemáticas com recurso ao cálculo algébrico simbólico . . . . .	395
<i>Helder Martins, António Domingos</i>	
Recursos ativos na aprendizagem da matemática: o caso dos materiais manipuláveis . . . . .	405
<i>Pedro Tadeu, Maria do Céu Ribeiro, Inmaculada Garcia-Martinez</i>	
Resolução de uma tarefa de proporcionalidade por futuros professores dos primeiros anos escolares . . . . .	418
<i>José António Fernandes, Paula Maria Barros, Gabriela Gonçalves</i>	
<b>Práticas Educativas e Supervisão Pedagógica . . . . .</b>	<b>431</b>
A formação inicial de professores como oportunidade de desenvolvimento profissional docente . . . . .	433
<i>Isabel Cláudia Nogueira, Teresa Fernández, Fernanda Costa Pinheiro</i>	
A função de delegado de disciplina: estudo em São Tomé e Príncipe . . . . .	441
<i>António Coelho, Branca Miranda</i>	
A igualdade de género na visão dos agentes educativos . . . . .	453
<i>Cristiana Ribeiro, Ana Cláudia Loureiro, Cristina Mesquita</i>	
A leitura e escrita: quando o educador de infância faz a diferença . . . . .	465
<i>Rosa Maria Ramos Novo, Ana Raquel Russo Prada</i>	
Abordagem das questões ambientais no processo de ensino-aprendizagem: percepção dos professores . . . . .	475
<i>Júlia Fernandes, Maria José Rodrigues</i>	
Avaliando aprendizagens no jardim de infância: uma experiência de construção do portefólio . . . . .	483
<i>Beatriz Gomes, Miguel Oliveira</i>	
Brincar e aprender nos espaços verdes urbanos . . . . .	492
<i>Lidia Machado dos Santos, Bruno Martins</i>	

Buscando la mejora escolar en secundaria mediante un proyecto pedagógico eficaz . . . . .	502
<i>Inmaculada García-Martínez, Katia Álvarez Díaz, José Ramón Márquez-Díaz, José Luis Ubago-Jiménez</i>	
Cartas à educação de jovens e adultos . . . . .	512
<i>Carla Luz Salaibb Dotta, Elisete Enir Bernardi Garcia</i>	
Conceções dos docentes sobre currículo, planeamento e avaliação . . . . .	524
<i>Carla Sofia Araújo, Cristina Mesquita, Luís Castanheira, Maria José Rodrigues</i>	
Cultura de escola, liderança e supervisão de professores: dinâmicas em desenvolvimento . . . . .	537
<i>Ana Isabel Matos</i>	
Discurso dos professores: avaliação dos alunos e reflexão sobre a ação educativa . . . . .	549
<i>Carlos Teixeira, Angelina Sanches, Manuel Vara Pires, Cristina Mesquita</i>	
Educação infantil: aspectos do processo de profissionalização e valorização docente no Brasil . . .	561
<i>Viviane de Lourdes Costa Rosa dos Santos, Jaime Farias Dresch</i>	
Estratégias de ensino e aprendizagem na educação básica . . . . .	573
<i>Adriana Filipa Branco Barbosa, Adorinda Gonçalves</i>	
Instrumento para el análisis del prácticum en educación social . . . . .	585
<i>Mercedes López-Aguado, Rosa María Ramos Novo, Lourdes Gutiérrez-Provecho, Ana Raquel Russo Prada, Ana María de Caso Fuertes, Sofia Marisa Alves Bergano, Maria do Céu Ribeiro</i>	
Metodologias ativas e tecnologias digitais: contributos para o desenvolvimento da consciência histórica . . . . .	595
<i>Vânia Graça, Altina Ramos, Glória Solé</i>	
Na formação inicial de professores, a investigação-ação revelada pelos relatórios de estágio . . . . .	607
<i>Ana Isabel Moreira, Pedro Duarte</i>	
O espaço museológico no processo educativo: reflexões sobre as aprendizagens . . . . .	620
<i>Maria do Céu Ribeiro, Marília Castro, Patrícia Pires</i>	
O lúdico como estratégia de ensino-aprendizagem: uma experiência pedagógica com crianças . . .	631
<i>Inês Isabel Pereira, Luís Castanheira</i>	
O projeto literatura de potencial receção infantojuvenil na promoção da educação inclusiva . . . .	640
<i>Carla Guerreiro, Paula Vaz, João Gomes, Marco Costa</i>	
O uso de dados como caminho para direcionar a formação dos professores na escola . . . . .	649
<i>Cristiane de Fatima Budek Dias, Guataçara dos Santos Junior, Rafael Dornelles Lima, Regina Celia Dornelles Lima, Cristina Mesquita</i>	
Pedagogical practices for teaching through an additional language in academic contexts . . . . .	661
<i>David Marsh, Letizia Cinganotto</i>	
Perspetivas dos professores acerca do (im)pacto da supervisão pedagógica no desenvolvimento profissional . . . . .	673
<i>Luiz Cláudio Queiroga, Carlos Barreira</i>	
Sucesso educativo: um projeto em e para a ação . . . . .	684
<i>Cristina Martins, Delmina Pires, Elza Mesquita, Cristina Mesquita</i>	

Supervisão e colaboração: estudo realizado num agrupamento de escolas .....	695
<i>Conceição da Natividade Oliveira, Isolina Oliveira</i>	
Supervisão pedagógica, inovação das práticas e desenvolvimento profissional em comunidades de aprendizagem .....	708
<i>Carlos Barreira, Branca Miranda, Isolina Oliveira</i>	
Tecnologia e infância: um estudo sobre as conceções dos educadores .....	719
<i>Ana Cláudia Loureiro, Cristiana Ribeiro, Cristina Mesquita, Rui Pedro Lopes</i>	
Trabalho cooperativo e colaborativo no ensino das ciências naturais do 2.º CEB .....	731
<i>João Rocha, Anabela Novais, Juliana Pacheco</i>	
¡Quiero ser docente!: identidad profesional del profesorado en formación .....	744
<i>Olga Buzón-García, Luisa Vega-Caro, Alba Vico-Bosch</i>	
<b>Formação Docente e Educação para o Desenvolvimento .....</b>	<b>757</b>
A ENED e a cobertura jornalística da ação da ONU e AI .....	759
<i>Luís Miguel Cardoso, Isabel Silva, Teresa Mendes, Amélia Marchão, Luisa Carvalho</i>	
A educação para o desenvolvimento face à agenda da OCDE .....	771
<i>Henrique Ramalho</i>	
A formação docente na educação bilíngue para alunos com surdez .....	784
<i>Wolney Gomes Almeida, Anabela Cruz-Santos</i>	
Análise aos descritores oficiais da formação docente na linha do desenvolvimento cívico .....	795
<i>Henrique Ramalho</i>	
Análisis sociohermenéutico del conocimiento sobre las enfermedades raras en estudiantes de educación .....	808
<i>Juan R. Coca, Susana Gómez Redondo</i>	
Arte, educação e inclusão social: o flashmob como agente de cidadania ativa .....	816
<i>Maria do Rosário de Silva Santana, Helena Maria da Silva Santana</i>	
Atitudes dos jovens face ao ambiente, idade e sexo .....	824
<i>Maria da Conceição Martins, Feliciano Veiga</i>	
Avaliação global da cooperação na formação de educadores e professores 1.º CEB .....	837
<i>Sónia Galinha, Ricardo São João, Paula Vaz, Jacinto Jardim</i>	
Colégio do Forte: educar com e nos valores, nos e pelos afetos .....	848
<i>Maria João Brandão da Silva Gaspar, Ricardo Aldair Corrêa dos Santos, Adriana Pereira Gorgita dos Santos, Estela Pinto Ribeiro Lamas</i>	
Critical thinking and teacher's profile: central competences in the educational process .....	861
<i>Samir Zedam, Luís Castanheira, Cristina Mesquita</i>	
Discriminação, currículo e sociedade .....	871
<i>Marisa Batista</i>	
Diz-me o que ensinas, dir-te-ei quem és... literatura para uma educação na ética .....	883
<i>Carla Guerreiro</i>	

Escola +feliz: papel do autoconhecimento e da felicidade na educação para o desenvolvimento . . . . .	892
<i>Ivana de Campos Ribeiro, Albertina Raposo, Dora Grassi-Kassisse, Olga Maria Assunção Pinto dos Santos, Patrícia Mendes Calixto, Lucia Helena Almeida</i>	
Escolas transformadoras: uma experiência de colaboração como contributo para novos paradigmas educativos . . . . .	904
<i>Sandra Fernandes, Teresa Gonçalves, Margarida Silveira, Marta Uva, Hugo Marques, La Salete Coelho, Albertina Raposo, Ana Piedade, Céu André, Leonor Teixeira, José Pedro Fernandes, Susana Colaço</i>	
Estudo de caso de um projeto editorial de investigação jovem . . . . .	914
<i>Lucas Duarte Oliveira, Dyowanne Hiulei Schmitt, Vitor Gonçalves</i>	
Formação continuada de professores na perspectiva de inclusão do aluno surdo . . . . .	926
<i>Juliane Retko Urban, Eliane Maria Morriesen, Antonio Carlos Frasson</i>	
La formación del profesorado para el cambio de actitudes hacia el autismo . . . . .	936
<i>Verónica Nistal, Mercedes López-Aguado, Lourdes Gutiérrez-Provecho</i>	
Literatura, arte, formação: confluências e influências na criação de projeto artístico multidisciplinar . . . . .	946
<i>Helena Maria da Silva Santana, Maria do Rosário de Silva Santana</i>	
Male teachers in kindergartens: the perspective of female kindergarten teachers . . . . .	955
<i>Paulina Koperna</i>	
Os objetivos para o desenvolvimento sustentável no aprendizado de língua inglesa . . . . .	966
<i>Sandra Regina Fonseca Moreira</i>	
Práticas pedagógicas e literacia ambiental: a importância da água . . . . .	978
<i>Carla Líliliana Fernandes Gomes, Isabel Correia Dias, Olga Maria Assunção Pinto dos Santos</i>	
Reler a educação para o desenvolvimento em “Histórias da minha rua” . . . . .	988
<i>Ana Isabel Silva, Dulce Melão</i>	
Visibilidad y difusión de proyectos Erasmus+ a través de redes sociales: FORDYS-VAR . . . . .	1000
<i>Sonia Rodríguez Cano, Vanesa Delgado Benito, Vanesa Ausín Villaverde, Raquel Casado Muñoz, Susana María Cuevas Romero</i>	
“À flor dos livros”: a literatura na educação emocional infantil . . . . .	1007
<i>Carla Guerreiro, Ana Luz Ferreira</i>	
“Teachers as political actors”: what can George Counts tell us? . . . . .	1018
<i>Giambattista Bufalino</i>	
<b>Práticas Pedagógicas no Ensino Superior . . . . .</b>	<b>1031</b>
Adaptação de uma unidade curricular ao ambiente virtual de aprendizagem . . . . .	1033
<i>Roberta de Souza Leone, Paula Mesquita, Rui Pedro Lopes</i>	
Aprendizaje colaborativo basado en herramientas tecnológicas en un aula virtual . . . . .	1045
<i>Carmen Romero-García, Olga Buzón-García</i>	
Artigo científico: o desafio do aluno iniciante na universidade . . . . .	1057
<i>Marizete Righi Cechin, Andreza Frare</i>	

Contributo de técnicas de ensino à formação do professor do ensino superior . . . . .	1069
<i>Vera Cristina de Quadros, Susana Carreira, Marli Teresinha Quartieri, José Cláudio Del Pino</i>	
Desconstruindo entendimentos e usos da avaliação: estudo com estagiários de educação física . .	1081
<i>André Moura, Amândio Graça, Paula Batista</i>	
Diseño e implementación de una propuesta didáctica etnobotánica en estudios universitarios culinarios . . . . .	1093
<i>Pablo Orduna, Virginia Pascual</i>	
El encuentro intergeneracional como reflexión socio-didáctica para futuros docentes: una experiencia práctica . . . . .	1105
<i>Lidia Sanz Molina, Elena Jiménez García, Susana Gómez Redondo</i>	
Ensino e aprendizagem de álgebra linear: não vai dar primeiro a teoria?! . . . . .	1116
<i>Paula Maria Barros, José António Fernandes</i>	
Implicação dos estudantes no processo de avaliação: estudo exploratório no ensino superior . . .	1128
<i>Paula Maria Barros, Cristina Martins</i>	
Inclusão educativa: do passado ao presente . . . . .	1139
<i>Evangelina Bonifácio, Luís Castanheira, Cristina Mesquita</i>	
Modelação 2D na disciplina de ciências naturais: construção de cadeias tróficas . . . . .	1149
<i>Maria Fernanda Vicente, Maria José Rodrigues</i>	
Monitorização de práticas formativas no processo de investigação na formação de professores . .	1158
<i>Isabel Cláudia Nogueira, Daniela Gonçalves</i>	
O ensino da investigação em cursos de formação inicial de professores . . . . .	1167
<i>Paulo Jorge Santos</i>	
O processo de leitura e interpretação de gráficos: desafios e possibilidades . . . . .	1179
<i>Luane da Costa Pinto Lins Fragoso</i>	
Once upon a time... an insight into the teaching of translation history . . . . .	1192
<i>Isabel Chumbo</i>	
Os desafios na formação do egresso frente às demandas da revolução 4.0 . . . . .	1202
<i>Tanatiana Ferreira Guelbert, Marcelo Guelbert, Karla Silva, Elis Regina Duarte, Carlos Ramos</i>	
Os diplomados da UniPiaget: sua implicação na educação e no contexto laboral . . . . .	1214
<i>Euclides Manuel Lopes Furtado</i>	
Percepción de la cultura visual por parte de futuros profesores portugueses . . . . .	1226
<i>Pablo Coca Jiménez, Luís Castanheira, Manuel Vara Pires</i>	
Personality traits and organizational performance of Portuguese higher education institutions . .	1239
<i>Pedro Ribeiro Mucharreira, Marina Godinho Antunes, Maria do Rosário Teixeira Justino, Joaquín Teixeira</i>	
Training for university teachers on intellectual disabilities: an exploratory investigation . . . . .	1249
<i>Lucio Cottini, Antonella Valenti, Berta Martini, Manuela Valentini, Vincenzo Biancalana, Monica Tombolato, Alessandra Maria Straniero, Lorena Montesano, Sonia Sapia</i>	

Índice de Autores.....	1261
Índice de Palavras-chave .....	1265



## **De-constructing dominant narratives in inclusive education: new perspectives on teacher education**

Gabriella D'Aprile<sup>1</sup>, Giambattista Bufalino<sup>1</sup>  
gabriella.daprile@unict.it, giambattista.bufalino@unict.it

<sup>1</sup> *Department of Educational Sciences, University of Catania, Italy*

### **Abstract**

While the socio-political and moral arguments for inclusion have been well established, insufficient attention is paid to understanding the implicit dynamics that contribute to the creation of an inclusive education system. Furthermore, where consideration has been given to helping schools build a climate for inclusion, this tends to focus on the management model of school practices. It is our belief that the time for ideology and rhetoric has gone. In this regard, the paper focuses on the role of teachers and the need for better teacher education to support them. In doing so, it presents meaningful ways of de-constructing dominant representations/narrations in inclusive educational practices with the aim of identifying any discrepancy between manifest and implicit educational and cultural models in teaching practices. Teachers have, in fact, a set of latent implicit beliefs, attitudes, and theories related to the nature of learning as well as to the representations of diversity and difference. This “invisible world” influences educational strategies and the so-called ‘implicit curriculum’, by operating at both at individual and collective levels. In view of these premises, this contribution explores a narrative and biographical approach to diversity in teaching and research. More precisely, visual narratives are emphasized as epistemological and methodological tools for the discovery of implicit conceptions and views on diversity in educational practices. An example of application using the Lego® Serious Play® (LSP) methodology, adopted as a ‘unconventional’ approach to training for meaningful learning and building a shared understanding of diversity, is also provided in the context of the constructionist learning philosophy. In this sense, this paper considers alternative strategies in the field of teacher education that need to be adopted in order to move beyond rhetorical approaches towards to authentic and inclusive practices.

**Keywords:** inclusive education, deconstruction, teacher education, narrative approach, Lego® Serious Play®.

### **Resumen**

Si bien los argumentos sociopolíticos y morales para la inclusión están bien establecidos, no se ha prestado suficiente atención a la comprensión de las dinámicas educativas implícitas que llevan a la creación de un sistema educativo inclusivo. Además, allí donde se ha focalizado la atención en ayudar a las escuelas para crear un clima inclusivo, se ha tendido a centrarse en un modelo administrativo de prácticas escolares. Creemos que el tiempo de la ideología y la retórica se ha agotado. En ese sentido, este trabajo se centra en el impacto de la inclusión en el papel de los docentes y en la necesidad de mejorar la formación docente para apoyarlos. De este modo, esta investigación se enfoca en formas significativas de deconstruir las representaciones / narraciones dominantes en las prácticas educativas inclusivas para identificar cualquier discrepancia entre los modelos educativos

y culturales manifiestos e implícitos en las prácticas docentes. De hecho, los profesores tienen una serie de creencias, actitudes y teorías relacionadas con la naturaleza del aprendizaje, así como con las representaciones de la diversidad y la diferencia que están latentes o implícitas. Al operar tanto a nivel individual como colectivo, este “mundo invisible” puede afectar las estrategias y prácticas educativas que influyen en el llamado “plan de estudios implícito”. Dadas estas premisas, esta contribución explora un enfoque narrativo y biográfico de la diversidad en la formación e investigación docente. Más específicamente, se enfatiza el uso de la narración visual y de metáforas como dispositivos epistémicos y metodológicos para revelar concepciones y puntos de vista implícitos sobre la diversidad en las prácticas didácticas y educativas. Basándose en la filosofía del aprendizaje construccionista, se proporciona también un ejemplo de una aplicación de investigación con la metodología Lego® Serious Play® (LSP), adoptada como un medio “no convencional” de recopilar datos, de brindar un aprendizaje significativo y de construir un conocimiento compartido de la diversidad. A continuación, se consideran enfoques y estrategias alternativas en la formación docente que son necesarios adoptar para ir más allá de la retórica hacia prácticas educativas inclusivas auténticas.

**Palabras clave:** educación inclusiva, deconstrucción, formación docente, enfoque narrativo, Lego® Serious Play®.

## 1 Education for everyone: beyond a rhetorical approach

There is a growing recognition of “diversity” as a norm in societies around the world, creating further challenges for education systems, especially for teachers.

Most European countries have recognized inclusive education as a means of ensuring equal rights in education, while the aim of “inclusion” is now at the heart of both education and social policy. When we turn our attention to various international organizations, such as UNICEF, UNESCO, the Council of Europe, the United Nations and the European Union, concepts of inclusion have several common ideal elements (Hardy & Woodcock, 2015). However, while meanings are diverse and ambiguous, inclusion requires a process of reforming and changing the school as a whole in order to ensure that all students have access to a range of educational opportunities (Mittler, 2012). The values of inclusion revolve around fellowship, participation, democratization, equal access, quality, equity and justice. Such expectations are clear and widely accepted ethical ideals attributed to inclusion while Haug (2017) refers to them as “a masterpiece of rhetoric, easy to accept and difficult to be against or even criticize” (p. 207). In this sense, the socio-political and moral arguments for inclusion have been well established, while inclusion is strongly based on value and ideology, in the same category as other similar concepts such as democracy and social justice.

For the purpose of this work, inclusion is defined as:

a transformative process that ensures full participation and access to quality learning opportunities for all children, young people and adults, respecting and valuing diversity, and eliminating all forms of discrimination in and through education. The term inclusion represents a commitment to making preschools, schools, and other education settings, places in which everyone is valued and belongs, and diversity is seen as enriching (UNESCO, 2019).

This definition represents a commitment to the creation of pre-schools, schools and other setting for lifelong learning, such as workplaces and communities, places where everyone

is valued and belongs, and where diversity is seen as enriching. However, according to the UNICEF report (2019), nearly 260 million children who should be in primary or secondary school are not, and there are many reasons for this: physical disabilities and cognitive impairments, conflicts and crisis, gender and economic inequalities, among other factors, constitute major long-term barriers.

Thus, inclusive education continues to be misleading, resulting in a debate fuelled by political and ideological concerns. These differences have often led to contentious discussions about how and for whom the inclusion of students should be achieved.

In this context, the teacher's role is central to the development of educational processes and practices based on the principles of open and inclusive schools (Forlin, 2012; Shulman & Mesa-Bains, 2018). The EU and its Member States have called for renewed efforts to prepare teachers for diversity and to lay the foundations for more inclusive society through education (Donnelly & Watkins, 2011). They recognise the need to empower and equip teachers to take an active stand against all forms of discrimination, to meet the needs of pupils from diverse backgrounds, to share common fundamental values and to prevent racism and intolerance.

Following this, there is a growing need to prepare future teachers to build on the benefits of diversity, moving from "compensatory" to inclusive learning approaches. As a result, teacher education has become the key to promoting the development of a quality inclusive education system. It plays a key role in making the necessary and possible changes to a collaborative culture, and in preparing teachers to be open to diversity and differences. It should be noted, however, the embedded or situated nature of the professional development of teachers: in the context of the school environment and its culture, and in relation to how educational systems and policies affect their working lives.

Inclusive reforms, in particular, depend on the ability of teachers to implement any new approach and help colleagues understand how it fits with their values, skills, and expertise. However, there seems to be a common expectation that teachers will readily accept new policies and practices and adapt to changes linked to new systems, while very little consideration is given to the personal beliefs and attitudes of the teachers. In fact, perceptions and attitudes towards "diversity" have an impact on the design of teaching/learning paths from an inclusive perspective (Symeonidou & Phtiaka, 2009).

In this context, more investment in teacher education is needed to promote an ethic based on openness and mutual recognition, as well as a collective assumption of responsibility. However, insufficient attention has been paid to understanding the implicit dynamics of education that contribute to the development of an inclusive education system. Also, where attention has been paid to helping schools create a climate of inclusion, this tends to focus only on the management model of the entire school practice. In the view of these assumptions, it is necessary to focus not only on cognitive levels and competencies, but also on the emotional and relational levels that can be developed through the experience of contact, the sharing of common goals and collaborative practices. Understanding the perception of future teachers about inclusive education and diversity and the factors that influence their attitudes may help in developing methodologies that can help to change the attitudes of teachers in a positive way.

In view of these premises, in this paper, we would like to present meaningful and alternative ways, other than conventional and rhetorical ones, of deconstructing dominant narratives/representations in the field of teacher education. To this end, visual narratives

are emphasized as epistemological and methodological tools for the discovery of implicit conceptions and views of diversity in educational practices.

More specifically, this paper is structured as follows. Having presented a traditional and rhetorical approach to teacher education (par.1), we recognize the importance of exploring implicit learning theories and representations of teacher diversity in the professional development of teachers and their impact on teaching practices (par. 2). Teacher training should, in fact, focus on personal epistemologies, internal representations of teaching practices and implicit learning theories. Hence, in par. 3, we present the methodological foundation underpinning in-service teacher training initiatives at the Department of Educational Sciences at the University of Catania. In particular, the LPS (Lego Serious Play) approach to teacher education is described as an example of application. Finally, in par. 4., the (positive) impact of these alternative methods on the learning-teaching process, and the importance of more inclusive, self-reflected teaching practices in teacher education are highlighted.

## **2 Teaching between “visible” and “invisible” worlds**

Teacher education plays a central role in creating authentically inclusive schools that are open to all differences (Fiorucci, 2015; Coelho, Blázquez, & Cubo 2017; Hymel & Katz, 2019). In this context, the teaching/learning process has been under discussion for several years now. The aim is to explore new dimensions of teacher professionalism since teachers are not only responsible for transmitting cultural knowledge, but are also called upon to play an important role in promoting the current political and social processes of change. In that direction, the essential professional re-qualification is not sufficient, but a didactic transformation is needed, assuming a new profile of the teacher being a researcher, that is, a teacher who works not only in the sense of mere execution, but also researches and recognizes the specific training needs of students in continuous change (Fiorucci, 2011; 2019).

Teachers are therefore asked to question their conventional teaching model, which may have an impact on the representation of diversity and inclusive educational practices in schools. For this reason, attention must be given not only to the knowledge and skills to be acquired, but also to processes: “the behavioural changes, the creation of strategies, the change in attitude, the replacement of paradigms, the theoretical reformulations and all hesitations, large and small, that constitute the way of knowing and learning” (Fabbri, 2012, p. 25). Paying attention to these dimensions means favouring the meta- reflections and awareness of teachers on their experiential and cultural background and, more importantly, encouraging them to welcome the category of “change” that is essential to foster an authentic encounter with diversity.

Approaches to teacher education intervention need to be reconsidered in order to explore teacher personal epistemologies, representations of diversity, teaching styles and implicit learning theories, and to detect any discrepancy between manifest educational and cultural models and implicit non-formalized models. The ultimate aim is to deconstruct them from a transformative perspective (Biesta, 2009).

School is a living environment in which cultural models and images of diversity are fixed; all those involved in the schools have opinions about culture and diversity, although some are more aware of them than others. Thus, in teaching processes a dual curriculum can be

differentiated: an explicit curriculum that relates to the intentional choices of the objectives, contents and methodologies of didactic action; and a hidden curriculum that acts in a latent and silent manner in the work of the school, bringing with it attitudes, expectations, motivations, dimensions that are not the subject of explicit planning. The “invisible” but hidden curriculum is important because it reflects implicit powerful forces that shape everyday activities and also provides a methodological rationale for the study of overarching themes in education. In fact, the teacher’s practices are based on different assumptions that may come from a number of sources: their own experience as learners and the way they interpret them, advice from trusted sources (usually colleagues), what research and practice generally suggest and how students responds to their actions. It is important to train teachers to deal with their own conceptual beliefs which have a strong emotional and evaluative characterisation: they can lay the foundation for a community that is welcoming and inclusive, or one that rejects and pushes away.

Teachers’ pedagogical culture, their teaching style, their mental attitudes towards diversity, as well as the quality of educational planning and classroom experience have a significant impact on the reception, participation and inclusion of students in schools (Perla, 2008; 2010; 2011).

This issue is inevitably reflected in the ethics of a “didactical way of acting” (Rivoltella & Rossi, 2017), not only in methodological terms, but also in the affective and emotional sphere, which is the most invisible and unconscious dimension of the educational relationship (Bonetta, 2017).

From a viewpoint of “critical ethnocentrism” (De Martino, 1977) and of the cognitive, affective, and emotional decentralization, teachers need to rediscover their important position as generative agents of change in order to build an open and inclusive school.

In this sense, the insights from the Neo-Piagetian research line are of particular interest as they have profound implications for adult education, especially for teachers and educators. In this context, Fabbri & Munari (1994; 1997; 2000; 2005a; 2005b) have suggested a significant approach to the study of cognitive processes. Through this study line, both scholars wish to regain the older sense of the Greek word episteme as it relates to the exercise of theory and action in the context of knowledge. The Operational Epistemology approach (Fabbri 1993; 2004; 2012) is not only a theoretical model, but also a methodological and intervention strategy for learning processes; it is actually intended to make learners aware of their knowledge processes through active experimentation.

This perspective encourages educational reflection on the relationship that individuals develops with knowledge, and explores the value system used to build cultural positions and representations. The relationship with knowledge, as both authors argue, is not only cognitive in nature, but is the result of both individual and collective expectations of beliefs, behaviours and conventions. The basic premise of Operational Epistemology is that, in our own way of knowing, conceptualization systems are inseparably linked to value systems (Fabbri, 2012). This means, in other words, that there is no pure learning, but that it is imbued with our subjectivity and our ethical values. Cognitive knowledge is always combined with personal, emotional, ethical and subjective experience, in the cognitive and learning dimensions.

An important process is that is of *déplacement* which is necessary for any cognitive awareness. From an etymological point of view, *déplacement* is a French word that

implies the action of moving or moving something. Metaphorically, the wider the movement action that it refers to, the more it is possible to shift one's point of view, one's attention, one's gaze, to find unexpected and surprising "realities". From a constructivist perspective, cognitive *déplacement* is characterized as an ability to stimulate the learner into an unpredictable pathway, curiosity and creativity:

it reduces cognitive defences, eliminates the use of prefabricated responses, and thus invests and reveals the deepest knowledge of the subject, its relationship with certain knowledge and its non-expressed beliefs (Amietta et al., 2011 p. 181).

It defines a kind of internal disruption that leads to looking elsewhere, thus deciding on a certain enrichment, as any element perceived or discovered may become necessary and more significant. Cognitive *déplacement* directly take into account the personal value system of the subject (to which the personal way of understanding is inextricably linked), making people aware that no awareness is never free from involvement or personal beliefs, but is still imbued with values, desires, affective and experiential aspects.

New epistemological awareness needs to be promoted in teachers, that is, not so much awareness of cognitive processes per se, but of the relationship that has developed with them. In this direction, it is important to explore the profound meanings of educational action, i.e. practices that structure spaces, times and emotional commitment, affective dynamics, conceptual frameworks, rediscovering the essential link with human experience as a whole, for a deeper and more stratified view of reality (Baldacci, 2006). Leaving borders definitely creates disorientation, but it is a basic concept to experience the "new" and to open up a variety of possibilities. This epistemological and methodological approach, which enables teachers to become active builders of theoretical assumptions that guide their relationship with diversity, is still little valued in the context of teacher education (Baldacci, 2013).

In view of this epistemological premise, we recognize the importance of exploring implicit learning theories and representations of teacher diversity in the professional development of teachers and of de-constructing the dominant representations/narrations in educational practices (Striano, 2001; Strollo & Capobianco 2017; Strollo, 2018). To this end, based on our teaching and research experience, in the following section, we present a specific methodology that uses a narrative and biographical approach to diversity in teacher education. More precisely, we describe the methodological characterisation of the LEGO® Serious Play® (LSP) method and its adaptation for the professional development of teachers. This methodology is currently being used as part of in-service teacher training workshops within the Department of Educational Sciences at the University of Catania. This training opportunity is conceived as a learning space in which teachers can experience a strong link between theory and teaching/practical experience.

### **3 Adapting Lego® Serious Play® to teacher education**

This section explains how visual methodologies make the visible but hidden curriculum more comprehensible and "less hidden". More precisely, it presents how the LEGO® Serious Play® (LSP) approach can be used as a means of enabling teachers to understand their own professional identities in order to change implicit teaching styles and representations of diversity.

Thanks to this methodology, experiences and meaning are made tangible through visual representation and many can be understood in what other forms of communication may not necessarily allow (Packard, 2008; Pain, 2012). Visual methodologies rely on the use of metaphors and visual storytelling as epistemological and methodological ‘tools’ to reveal implicit conceptions and views on diversity in the didactical and educational practices (Wall, Hall, & Woolner, 2012). In this way, teachers can truly come into contact with their own personal way of interpreting and understanding diversity. The ultimate purpose of this methodology is to encourage teachers to adopt a conscious and open approach to self-reflection aimed at revising the theoretical and methodological premises of their professional activities. This approach encourages teachers to become active builders of knowledge.

Adopting this methodology, the experience of the teachers is defined by the processes of displacement/understanding/assignment of meaning and planning of intentional actions. This outlines a training framework for the acquisition/reconstruction of professional skills and a training space for the transformation of knowledge into competence (Pinto Minerva, & Vinella, 2013).

LSP is well established as a business technique and has been widely used in a number of commercial contexts. However, while the basis of the LSP is supported by a number of educational theories and practices, little implementation has yet been seen in educational contexts.

LSP is an approach that, through Lego bricks, has the potential to strengthen the capacity of the participants and invisible energies. Thanks to this methodology, the active participation of teachers in the learning process is enhanced; the constant and recursive control (feedback) of learning and self-assessment are encouraged.

The origins and intellectual foundations of this approach can be found in Piagetian constructivism, and in particular in Seymour Papert’s ideas of Constructionism (1986), Vygotsky’s (1962) ideas of language and thought, while at the same time using ideas of conceptual metaphors (Schön, 1983), and expanding upon ideas of play and Serious Play.

LSP offers teachers the opportunity to build tangible, individual and shared understandings of complex ideas in an immersive and engaging environment that helps shape and communicate their ideas. While the play dimension of LSP is an important component of successful workshops, it must also include an appropriate level of challenge. This balance of challenge and fun is consistent with much of the theory that promotes game design and the use of games in education. Papert (1986; 2002) proposes the idea of ‘hard fun’ in which things are enjoyable precisely because they present a challenge that is commensurate with the skills of the participants in order to maintain interest and commitment. Concrete thinking that evolves by doing is a type of thinking with characteristic advantages and uses, such as abstract or formal thinking. According to Papert, we can learn better and faster by engaging in the construction of a product that is external to us (a sandcastle, a car, a book). In other words: when we build the world, we build the mind. Doing and “thinking with the hands” gives participants the ability to achieve greater self-awareness by opening up creative resources and accessing forms of learning that would otherwise remain unexpressed or unused.

From this point of view, play is seen as a complex learning context in which limitations and constraints and prejudices can be broken down and shared awareness and learning encouraged. In other words, the LSP approach offers an opportunity to rediscover the

capacity of concrete thinking through the play (Kristiansen & Rasmussen, 2014; Peabody & Noyes, 2017; Zenk et al., 2018; McCusker, 2019). In fact, the playful context fosters mutual knowledge, accelerates learning and becomes a safe field of experimentation, in which different attitudes and strategies can be tested and conflict management skills can be trained.

The LSP workshops are run by facilitators. They define the times and methods, guide the participants towards the set goal, and ensure that training takes place in accordance with shared steps and rules. The core process of the workshop is structured into four different phases (Challenge, Building, Storytelling, Sharing).

The first phase (Challenge) consists of asking a specific question that all participants will have to answer by building a model with Lego bricks (Building). Examples of questions are: “What does inclusion look like in your school?” or “What was your experience of exclusion?”. In this task, the participants are asked to build a model that in some way represents themselves. The built models are a personal response to the different challenges posed by the facilitator. The role of facilitator is particularly important, since he/she must not interfere in any way with the construction of meaning. However, he/she may provide technical/constructive indications where the participant has difficulty representing a certain concept. In this way, the metaphorical language conveyed by a constructed model emerges in a cogent manner. In fact, the use of metaphor can become a tool of great interest due to its strong evocative power in terms of implicit implications for diversity. In this way, it assumes meaning not so much of what the constructed model represents visually, as of what the builder-participant attributes to it. Upon completion, participants are asked to explain to others how their model represents their responses. Each individual participant must “tell the story” of his/her model (Storytelling). This moment enables participants to listen to different narratives and allows them to detect similarities and/or differences by helping to broaden their cultural and social horizons, and to develop an attitude to welcome diversity in a spirit of mutual understanding. In the last phase, participants start the process of sharing and reflection. Comments on each model are shared and the reactions of participants to the different model responses are collected. It may also be beneficial to encourage more creative interpretation of models and to set precedents in storytelling and story-sharing practices (Ohler, 2008).

#### **4 Concluding notes. De-constructing dominant narratives in inclusive education**

The perspective of deconstruction (Higgs, 2003; Isidori, 2005; Mariani, 2008; Biesta, 2009; Vaccarelli, 2019) is one of the possible answers to the challenges of inclusive education, as it is well suited to tackling issues such as social representation, prejudice, educational attitudes, common sense knowledge and false beliefs that influence the relationship with diversity. Thus, deconstruction becomes a necessary premise for the training of teachers. However, deconstruction cannot be presented simply as the object and the content of the training itself; rather, it should also be adopted as a methodology and a training strategy, since it gives teachers the opportunity to experience the dissonance between perceptions, common sense and scientific knowledge of social realities; to identify words, labels, concepts, mystifications that guide the visions of diversity; to develop reflective skills i.e. how attitudes and their interpretation can influence the search for strategies aimed at addressing the complex problems of inclusive education (Massa, 2000).



In order to achieve these objectives, the use of metaphors as a tool for critical hermeneutic analysis is important for promoting the reflective skills of the participants in teacher education (Bufalino, D'Aprile, & Strongoli, 2019). These skills enable the research dimension of the teaching profession to emerge as teachers become innovators, curricula drivers, school change agents and “directors” of their own professional development. Being a teacher researcher sheds light on how teachers and their students live in their classroom life. Teacher researchers identify the actual training needs of students in their ongoing transformation. They foster awareness of the invisible and unconscious nature of their educational practices, which opens up new research directions for teacher education (Fiorucci, 2011).

In this article, we presented an epistemological and methodological approach that allows teachers to become active knowledge builders. In fact, visual methodologies allow the exploration of the profound meanings of educational-didactic practices and the eventual transformation of implicit assumptions (Sclavi, 2003). Going beyond “borders” is certainly a cause of disorientation, but it is the basis for opening up a number of possibilities. More specifically, we presented the application of the LSP methodology for teacher education. From our point of view, Lego bricks are just an example of mediating artifacts. In principle, any medium that allows participants to express their understandings and conceptions in a way that encourages play, sharing, flow and reflection would be welcomed. In fact, the method is based on symbols rather than on close physical similarity and other medium can be used for such workshops. However, given that what is required is an easily manipulated mediating artifact which makes people smile and want to play, then LEGO® fits the bill nicely. In our experience, the emotional reactions of the participants can be observed when LSP is introduced, usually a mixture of excitement and nostalgia that opens the door to “play”. Despite varying initial responses, all participants usually reach the “flow” state of effortless engagement. Also, focusing on models rather than individuals, and allowing each person to share, provides a level playing field for the individual. Each person has an equal voice and, as the creator, he/she owns the sense. The iterative method developed in the workshop promotes reflection. As the workshop continues, participants are given the opportunity to change their models, add depth to their meaning and share deeper insights.

At present, the inherent relevance of the LSP approach is evident across disciplines and can be used as educational tool. LSP is relatively expensive and can be time-consuming compared to more conventional approaches such as discussions or writing. Further analysis should show that LSP is capable of generating more knowledge than other existing techniques.

## 5 References

- Amietta P. L., Fabbri D., Munari A., & Trupia, P. (2011). *I destini cresciuti. Quattro percorsi nell'apprendere adulto: Quattro percorsi nell'apprendere adulto*. Milano: FrancoAngeli.
- Baldacci, M. (2006). *Ripensare il curriculum. Principi educativi e strategie didattiche*. Roma: Carocci.
- Baldacci, M. (Ed.) (2013). *La formazione dei docenti in Europa*. Milano: Mondadori.
- Biesta, G. (2009). Witnessing deconstruction in education: why quasi-transcendentalism matters. *Journal of philosophy of education*, 43(3), 391-404.

- Bonetta, G. (2017). *L'invisibile educativo: pedagogia, inconscio e fisica quantistica*. Roma: Armando Editore.
- Bufalino G., D'Aprile G., & Strongoli C.R. (2019) Metafore Didattica Conoscenza. Prospettive di ricerca e percorsi laboratoriali per la formazione interculturale, *Ricerche Pedagogiche* 53(212-213), 135-158.
- Coelho, F., Blázquez, F., & Cubo, S. (2017). Teacher training, attitudes and inclusion. *International Journal of Technology and Inclusive Education*, 6(1), 1032-1040.
- De Martino, E. (1977). *La fine del mondo. Contributo all'analisi delle apocalissi culturali*. Torino: Einaudi.
- Donnelly, V., & Watkins, A. (2011). Teacher education for inclusion in Europe. *Prospects*, 41(3), 341-353.
- Fabbri, D. (1993). Strategie dell'apprendere: Psicologia culturale ed epistemologia operativa. In E. Morgagni, & L. Pepa (Eds.), *Età adulta: Il sapere come necessità* (pp. 141-2153). Milano: Guerini e Associati.
- Fabbri, D. (2004). Oltre la metafora. Riflessioni sull'uso e l'abuso delle metafore nella formazione. *Adulità*, 20, 73-81.
- Fabbri, D. (2012). Per una epistemologia operativa del cambiamento. *Riflessioni Sistemiche*, 6, 43-54.
- Fabbri, D., & Munari, A. (1994). I laboratori di epistemologia operativa. In D. Demetrio, D. Fabbri, & S. Gherardi (Eds.), *Apprendere nelle organizzazioni. Proposte per la crescita cognitiva in età adulta* (pp. 239-251). Roma: La Nuova Italia Scientifica.
- Fabbri, D., & Munari A. (1997). *Understanding change: How to cope with a changing world*. Genève: Université de Genève et IOM.
- Fabbri, D., & Munari, A. (2005a). L'epistemologia operativa. In F. Merlini (Ed.), *Nuove tecnologie e nuove sensibilità. Comunicazione, identità, formazione* (pp. 260-268). Milano: FrancoAngeli.
- Fabbri, D., & Munari, A. (2005b). *Strategie del sapere*. Milano: Guerini.
- Fiorucci, M. (2011). *Gli altri siamo noi. La formazione interculturale degli operatori dell'educazione*. Roma: Armando.
- Fiorucci, M. (2015). La formazione interculturale degli insegnanti e degli educatori. *Formazione & Insegnamento*, 13(1), 55-70.
- Fiorucci, M. (2019). Narrazioni tossiche e dialogo interculturale. *MeTis-Mondi educativi. Temi indagati suggestioni*, 9, 15-34.
- Forlin, C. (Ed.). (2012). *Future directions for inclusive teacher education: An international perspective*. London: Routledge.
- Hardy, I., & Woodcock, S. (2015). Inclusive education policies: Discourses of difference, diversity and deficit. *International Journal of Inclusive Education*, 19(2), 141-164.
- Haug, P. (2017). Understanding inclusive education: ideals and reality. *Scandinavian Journal of Disability Research*, 19(3), 206-217.
- Higgs, P. (2003). Deconstruction and re-thinking education. *South African journal of education*, 22(3), 170-176.
- Hymel, S., & Katz, J. (2019). Designing classrooms for diversity: Fostering social inclusion. *Educational Psychologist*, 54(4), 331-339.
- Isidori, E. (2005). *Il modello decostruzionista nella ricerca pedagogica*. Roma: Aracne.
- Kristiansen, P., & Rasmussen, R. (2014). *Building a better business using the Lego serious play method*. New Jersey: John Wiley & Sons.

- Mariani, A. (2008). *La decostruzione in pedagogia: una frontiera teorico-educativa della postmodernità*. Roma: Armando Editore.
- Massa, R. (2000). La clinica della formazione. In AA.VV., *Istituzioni di Pedagogia e Scienze dell'educazione* (pp. 582-598). Roma-Bari: Laterza.
- McCusker, S. (2019). Everybody's monkey is important: LEGO® Serious Play® as a methodology for enabling equality of voice within diverse groups. *International Journal of Research & Method in Education*, 43(2) 1-17.
- Mittler, P. (2012). *Working towards inclusive education: Social contexts*. London: Routledge.
- Ohler, J. (2008). *Digital storytelling in the classroom: New media pathways to literacy, learning, and creativity*. Thousand Oaks, CA: Corwin Press.
- Packard, J. (2008). I'm gonna show you what it's really like out here: the power and limitation of participatory visual methods. *Visual Studies* 23(1) 63-76.
- Pain, H. (2012). A literature review to evaluate the choice and use of visual methods. *International Journal of Qualitative Methods*, 11(4), 303-319.
- Papert, S. (1986). *Constructionism: A new opportunity for elementary science education*. Cambridge: Massachusetts Institute of Technology, Media Laboratory, Epistemology and Learning Group.
- Papert, S. (2002). Hard fun. *Bangor Daily News*. Bangor ME.
- Peabody, M. A., & Noyes, S. (2017). Reflective boot camp: Adapting LEGO® SERIOUS PLAY® in higher education. *Reflective Practice*, 18(2), 232-243.
- Perla, L. (2008). L'incidenza dei saperi pre-riflessivi nella pratica didattica degli insegnanti novizi: prime risultanze di un'indagine sulle credenze attraverso le metafore. *Quaderni del Dipartimento di Scienze Pedagogiche e Didattiche*, 7, 249-267.
- Perla, L. (2010). *Didattica dell'implicito. Ciò che l'insegnante non sa*. Brescia: La Scuola.
- Perla, L. (2011). La ricerca didattica sugli impliciti d'aula. Opzioni epistemologiche. *Giornale Italiano della Ricerca Educativa*, 4, 119-130.
- Pinto Minerva, F., & Vinella, M. (2013) (Eds.). *Pensare la differenza scuola*. Bari: Progedit.
- Rivoltella, P. C., & Rossi, P. G (Eds.) (2017). *L'agire didattico. Manuale per l'insegnante*. Brescia: La Scuola editrice.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.
- Sclavi, M. (2003). *Arte di ascoltare e mondi possibili. Come si esce dalle cornici di cui siamo parte*. Milano: Mondadori.
- Shulman, J. H., & Mesa-Bains, A. (Eds.) (2018). *Diversity in the classroom: A casebook for teachers and teacher educators*. London: Routledge.
- Striano, M. (2001). *La razionalità riflessiva nell'agire educativo*. Napoli: Liguori.
- Strollo, M. R. (2018). La formazione pedagogica alla "rovescia": dalla pratica alla formalizzazione del sapere. *Metis*, 8(2), 99-122.
- Strollo, M. R., & Capobianco R. (2017). I "laboratori delle competenze" per la formazione del docente-ricercatore nel percorso FIT. *Formazione & insegnamento*, 3, 173-186.
- Symeonidou, S., & Phtiaka, H. (2009). Using teachers' prior knowledge, attitudes and beliefs to develop in-service teacher education courses for inclusion. *Teaching and Teacher Education*, 25(4), 543-550.
- UNESCO. (2019). *Cali commitment to equity and inclusion in education*. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000370910>
- UNICEF. (2019). *On the road to inclusion*. Retrieved from [http://www.iiep.unesco.org/sites/default/files/on\\_the\\_road\\_to\\_inclusion\\_web.pdf](http://www.iiep.unesco.org/sites/default/files/on_the_road_to_inclusion_web.pdf)

- Vaccarelli, A. (2019). Intercultura e formazione degli insegnanti: percorsi di decostruzione pedagogica. *Educazione Interculturale. Teorie, Ricerche, Pratiche*, 17(1), 22-40.
- Vygotsky, L. S. (1962). *Thought and language*. Cambridge, MA: MIT Press.
- Wall, K., Hall, E., & Woolner, P. (2012). Visual methodology: previously, now and in the future. *International Journal of Research and Method in Education* (Special Issue: Problematising Visual Methods), 35(3)223-226.
- Zenk, L., Hynek, N., Schreder, G., Zenk, A., Pausits, A., & Steiner, G. (2018). Designing Innovation Courses In Higher Education Using LEGO® SERIOUS PLAY®. *International Journal of Management and Applied Research*, 5(4), 245-263.