

Appendix B

Classroom Learning Environment in the Included Studies

| Included Study | Education Settings | Bilingual program | Language(s) of instruction | Teachers use of child's L1 | Teaching strategies | Peers use of child's L1 | Support or Intervention | Students' Outcome reported |
|----------------------------------|--|-----------------------------|-------------------------------|----------------------------|--|--|---|--|
| 1. Björk-Willén & Cromdal (2009) | Preschool | Not specified | Swedish, English, and Spanish | Use of L1 | Structured activities, multimodal learning experience, nonverbal communication used to reinforce instructions | Scaffolding by peers | No | N/A |
| 2. Bligh (2014) | Preschool | Not specified | English | Teacher assistant spoke L1 | Group activities, nonverbal communication, structured discussions, role-playing exercises, language-rich interactions through storytelling and discussions | -- | No | N/A |
| 3. Cekaite (2007) | Reception classroom, for refugee/im migrant children | Not specified | Swedish | Use of L1 | Cooperative and collaborative interactions among peers, structured classroom activities, use of L1, | Use of L1 | No | N/A |
| 4. Cekaite (2012) | Mainstream first-grade classroom | Monolingual Program | Swedish | -- | Tactile guidance to direct the child's attention, repeating imperatives for task instructions, scaffolding, Individual assistance during pull-out activities, positive reinforcement, peer collaboration | Peer collaboration | Affective Stances: Changing mood, attitude, feeling, and disposition towards L2 | stance changed significantly; more interest in participation |
| 5. Chaparro (2020) | Two-way immersion program | Bilingual Immersion Program | English, Spanish | Use of L1 | Flexible language policy, allowing use full language repertoire, , language-rich activities, small group activities, Close table seating promoting participation | Use of L1, peer interaction encouraged | No | N/A |

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| 6. Clarke (1989) | Preschool with L2 support | Not specified | English, Vietnamese | Use of L1 | Structured group activities, structured routines, interactive learning experiences, role play and play-based learning | Use of L1, peer interaction opportunities | No | N/A |
| 7. Dasilva-Iddings & Jang (2008) | Mainstream kindergarten | Monolingual Program | English | -- | structured routines, visual cues, nonverbal mediation, modified speech patterns, and task-related materials that supported the child's communication and participation | -- | Using classroom activities as a mediator to encourage participation | Child gained confidence, improved L2 skills, and actively participated in class. |
| 8. Day (1981) | Laboratory school in Honolulu | Not specified | English | -- | Structured classroom, peer interaction, opportunities to share stories, teacher as a facilitator | -- | No | N/A |
| 9. de Oliveira et al. (2016) | Kindergarten | Bilingual Approach | English | Use of L1 | encouraging active participation, individualized support available, visual aids, hands-on materials, cultural relevant content | Use of L1, peer collaboration | Using code switching by the teacher to encourage communication | Students showed a more expanded vocabulary in both languages |
| 10. Dominguez & Trawick-Smith (2018) | Child development center on a university campus | Not specified | English | Use of L1 | Multilingual resources and learning materials, clear communication expectations, multilingual support staff, culturally responsive curriculum | Use of L1, peer interactions and collaboration | No | N/A |
| 11. Drury (2007) | A British nursery school | Not specified | Pahari, English | Use of L1, experience with bilingual students | small group activities, book sharing sessions, use of visual aids. | Use of L1 | No | N/A |
| 12. Drury (2013) | A British nursery school | Not specified | English, Pahari | Use of L1, experience with multilingual children | small group activities, use of visual aids | Use of L1 | No | N/A |

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|----------------------------|---|-----------------------|-------------------------------|---|---|--|---|--|
| 13. Ervin-Tripp (1974) | French classroom in Geneva, Switzerland | Monolingual program | French | interactional dynamics between children and their teacher | multilingual settings | Peer interaction and collaboration | No | N/A |
| 14. Fernandez (2014) | Public primary school | L2 only program | Luxembourgish, German | -- | nonverbal resources available in the classroom, opportunities for participation, school support for Portuguese two hours a week | Peer support, peers from diverse language background | encouraging peripheral participation | began participating more in classroom activities and using more L2 |
| 15. Gibbons (1985) | Roman Catholic primary schools | Monolingual Program | Not specified, likely English | -- | -- | -- | No | N/A |
| 16. Hayes & Matusov (2005) | Dual-language kindergarten classroom | Dual Language program | Spanish, English | Use of L1 | interactive classroom activities | Use of L1 | Teacher-student conversation (using dialogue strategies to encourage communication) | Some success in long conversations, but overall dialogue attempts struggled. |
| 17. Huang & Hatch (1978) | Morning 2 hr play-school | Monolingual Program | English | No use of L1 | Teacher encouragement, one on one work | No use of L1 | No | N/A |
| 18. Itoh & Hatch (1978) | Nursery school | Monolingual Program | English | teacher providing feedback in L2 | English-speaking classroom, repetition games, use pictures to teach vocabulary | Use of L1, peer interaction | No | N/A |
| 19. Karem & Hobek (2022) | Local early childhood education program | Not specified | English | Use of L1 | Visual supports | Peer-mediation intervention, use of L1 | Peer-mediated intervention-partnering emergent bilingual students with monolingual for twenty minute sessions, twice a week for two weeks | exhibited increases in their conversation initiations and responses |

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| 20. Karniol (1990) | Hebrew daycare 4–6 hours daily | Immersion program | Hebrew | Use of L1 | visual aids (e.g., picture) used to support learning, interactive activities, L2 resources (e.g., books) | No use of L1, peer interaction encouraged | No | N/A |
| 21. Klenk (2004) | Kindergarten | Not specified | English, Spanish | Use of L1 | Multilingual resources (e.g., books), Individual tutoring by Klenk providing one on one speech practice through guided activities like storytelling | Use of L1 | Guided Language Practice: Child was paired with a L2 tutor one on one for thirty to forty minute sessions once a week | showed gains in L2 during sessions but still rarely talked in the classroom |
| 22. Krupa-Kwiatkowski (1998) | NR | Monolingual Program | English | -- | Afterschool ESL program | -- | No | N/A |
| 23. Kultti (2014) | Preschools | Monolingual Program | Swedish | -- | Structured activities, strong emphasis on using L2, participation in class was encouraged, communications during mealtime interactions, flexible group activities | -- | Interactional Activities Context using nonverbal cues | small improvements in participation |
| 24. Kultti (2015) | Two childcare centers in Australia | Monolingual Program | English | Teacher providing L2 verbal and nonverbal cues to engage the children | Children's nonverbal behaviors acknowledged and responded to, children are allowed to choose their preferred activities | -- | No | N/A |
| 25. Le Pichon & Jonge (2016) | Preschool | Monolingual Program | Dutch | -- | Small group settings, one-on-one interactions, teacher's effort to build rapport, relaxed and playful activities | Supportive peers | No | N/A |
| 26. Manigand (1999) | Classe Préparatoire | Not Specified | French | Use of L1 | Collaboration among teachers to provide supportive learning environments, open communication with parents | Use of L1 | No | N/A |

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|----------------------------------|--|--|----------------------|---|--|--|---|---|
| 27. Martín-Bylund (2018) | Bilingual preschool | Bilingual Program | Spanish, Swedish | Use of L1 | Scaffolding to support the child, participation was encouraged | Use of L1, peer interaction was encouraged | No | N/A |
| 28. Meyer (1994) | University laboratory preschool program | Multilingual and multicultural environment | Korean, English | Use of L1 | English support twice a week, structured learning activities, flexible seating arrangements | Use of L1, peer interaction encouraged | No | N/A |
| 29. Mfeka & Thomson (2019) | Foundation Phase schools | Multilingual Program | Zulu, Xhosa, English | -- | Use an innovative program model that adapted content to support children's learning, learners' progress in oral English skills was tracked over time | -- | using video game learning for L2 teaching | Outperformed control students across all subjects, including English. |
| 30. Sachs (1972) | nursery school to 2nd grade | Not specifically described | English | -- | -- | -- | No | N/A |
| 31. Saville-Troike (1988) | Regular nursery & elementary school | Monolingual Program | English | -- | Gradual exposure to L2, use of routines, encouraging imitation, visual support | Use of L1 | No | N/A |
| 32. Schwartz et al. (2019) | ESL pull-out instruction; mixed language classroom | Dual Language Program | English | Use of L1, experience with bilingual children | Structured activities, group activities | Use of L1 | No | N/A |
| 33. Saville-Troike et al. (1984) | Preschool | Multicultural program | Hebrew, Arabic | Use of L1 | Daily 30 min. ESL pull-out instruction that focuses on a child's individual needs. Classroom language was L1 & L2 | Use of L1 | No | N/A |
| 34. Tabors (1987) | University part-day preschool; 1.5 hrs. | Monolingual Program | English | Use of L1 | Supportive language techniques and loosely structured activities were used in the classroom, relaxed and playful opportunities. | Use of L1 in some cases | No | N/A |
| 35. Tse et al. (2021) | Local kindergarte | Monolingual Program | Chinese | No use of L1 | L1 students were given L2 mentoring sessions with an experienced tutor that provided individual support. | Use of L1 | Targeted individual support- children were paired with an L2 tutor who gave targeted practice | showed an expanded vocabulary, higher usage of L2, and small |

| | | | | | | | over six sessions n a month | gains in conversation initiation |
|---------------------------|------------------------------|-----------------------|---|--------------|--|--------------|-----------------------------|----------------------------------|
| 36. Vine (2006) | State primary school | L2 only program | Maori, English | No use of L1 | Activities were loosely structured, incorporating various elements like speakers coming in, TV, drawing, etc. into the overall curriculum. | No use of L1 | No | N/A |
| 37. Wilmes & Siry (2018) | Elementary school | Multilingual program | Luxembourgish, German (language of science instruction), French | Use of L1 | There were language models and structure incorporated in the activities and a priority on partner and pair work. | Use of L1 | No | N/A |
| 38. Winitz et al. (1995) | 2nd grade classroom | Monolingual Program-- | English | No use of L1 | Activities were structured and clearly marked. A tutor was assigned to him to help him with the L2 alphabet from June to the third week of August for 2 hours a day, twice a week, or for a total of about 36 hours. | No use of L1 | No | N/A |
| 39. Yamat et al. (2015) | Mainstream elementary school | Not specified-- | English, Malaysian | Use of L1 | visual teaching materials, class activities (e.g., role play), modeling conversation, participation was encouraged. | Use of L1 | No | N/A |
| 40. Yip & Matthews (2006) | NR | Not described | English, Cantonese | -- | -- | -- | No | N/A |

Note.

NR = not reported

In Gibbons (1985), Sachs (1972), and Yip & Matthews (2006), the classroom environment and strategies were not specifically described.

Classe Préparatoire is a preparation program for helping students to integrate into the mainstream French education system.