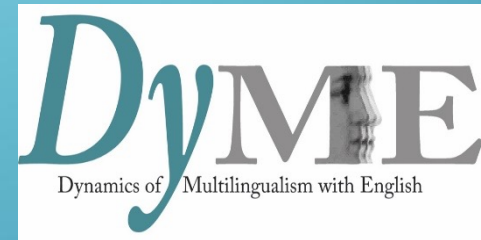
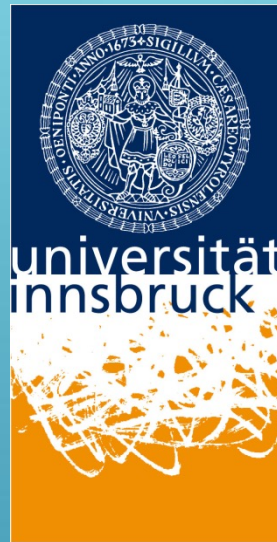


Multilingual awareness in learning and teaching: A DMM perspective

Ulrike Jessner



October 4th 2021 (digital talks)

structure

- Metalinguistic awareness as an emergent property in multilingual development: A CDST/DMM perspective
- Metalinguistic awareness in mono-, bi- and multilingual children
- Metalinguistic awareness in multilingual development
- Application to education: 5 building blocks

CDST = metaphoric lens

multilingualism lends itself to be studied from a

CT (complexity theory) / DST (dynamic systems theory) perspective = CDST

(see also emergentist, usage-based approaches, sociocognitive approaches)

CDST applied to multilingualism

- focus on change in systems
- sensitivity to initial conditions in processes
- emergent properties



CDST applied to multilingualism

focus on change in systems

- non-linearity of language learning
- reversibility of language learning (attrition & reactivation)

intrinsic dynamics of learner

learning and change is at once
individual and social

CDST applied to multilingualism

sensitivity to initial conditions in processes

“Systems with different initial conditions follow different trajectories, leading to divergent outcomes” (Larsen-Freeman 2014: 15) (butterfly effect; see Aronin & Jessner 2015)

becomes apparent in the L2 status in TLA studies as L3 learners often rely on their L2, and not on their dominant L1 (see eg De Angelis 2007)

plays a considerable role in understanding early multilingualism and/or simultaneous multilingual development in contrast to bi- or monolingual development (see recent work by Montanari & Quay 2019; Stavans & Jessner March 2022)

CDST applied to multilingualism

emergent properties

- result of autocatalytic effect
- only to be found in open systems
- function of the interaction between systems
- no systems (gestalt) properties per se
(plane, eye)

CDST applied to multilingualism

emergent properties

- metalinguistic awareness
- executive control (attention, inhibition)
- creativity

(for a recent overview of bi/multilingual advantage see Jessner 2018)

Applying CDST to Multilingualism

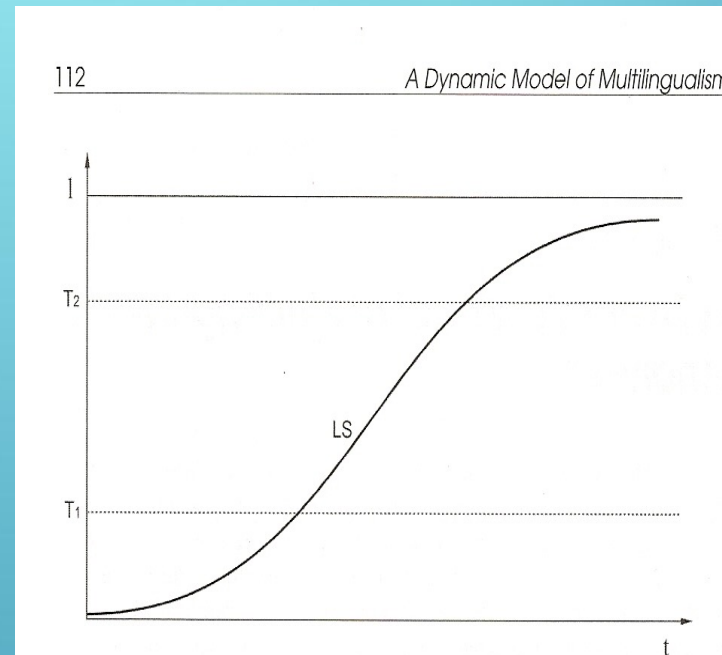
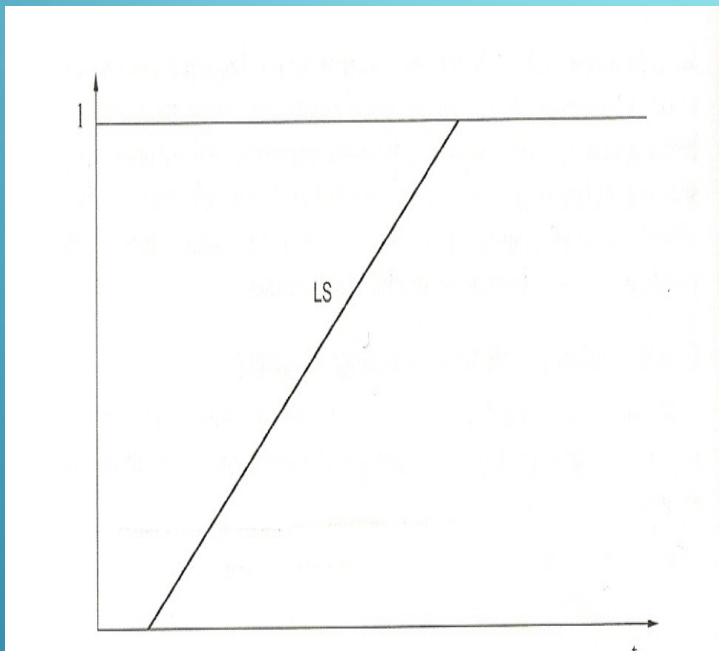
Dynamic Model of Multilingualism DMM

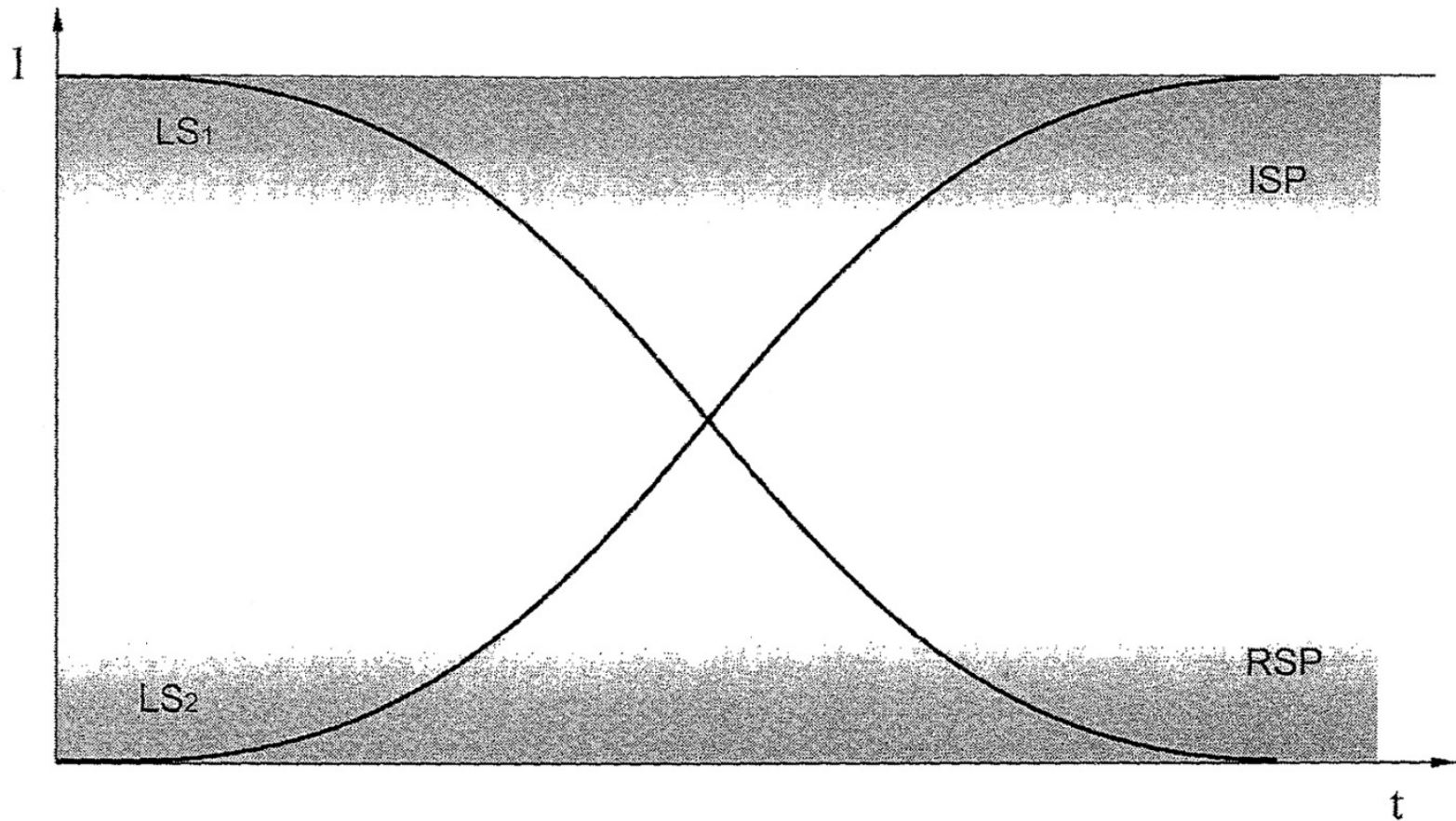
Herdina & Jessner 2002

- Complexity of multilingual learning
- Non-linearity of language learning
- Reversibility of language learning
- Focus on psycholinguistic systems rather than languages
- Interdependence of language systems
- Interaction with individual, social, psycholinguistic and contextual factors
- Holistic approach to multilingual learning and research (Grosjean, Cook, Cummins)

DMM: language development is not linear but

dynamic





Transitional bilingualism

LS_1 = first language system; LS_2 = second language system; ISP = ideal native speaker proficiency; RSP = rudimentary speaker proficiency; t = time; l = language level

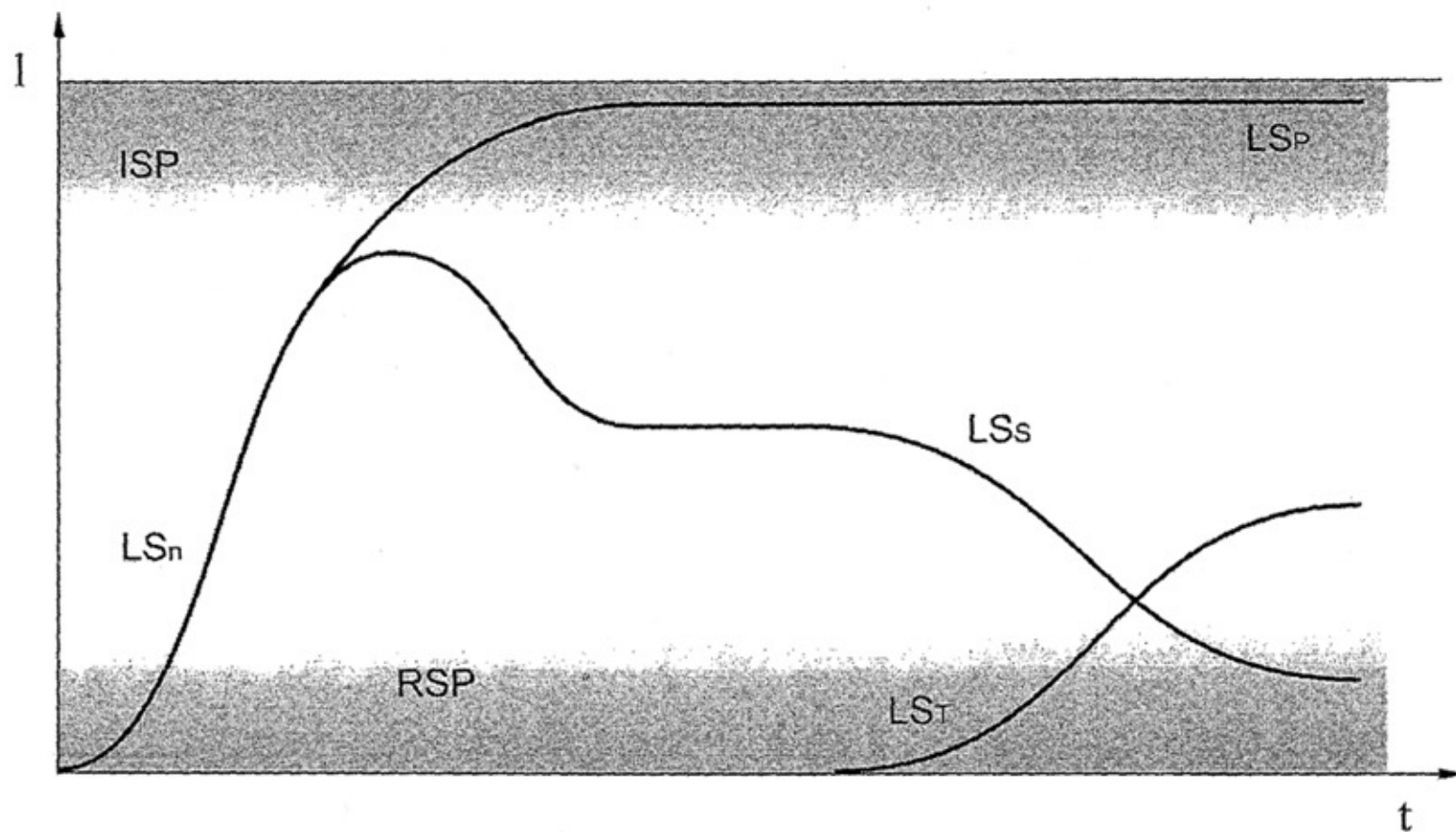


Figure 29b Learner multilingualism: overall development

LS_n = prior language system(s); LS_p = primary language system; LS_s = secondary language system; LS_t = tertiary language system; ISP = ideal native speaker proficiency; RSP = rudimentary speaker proficiency; t = time; l = language level

Learning and forgetting

- Attrition is an integral part of multilingual learning
- Language maintenance (effort) as a key factor in learning

---→ systems stability

MULTILINGUAL

PROFICIENCY

LS₁

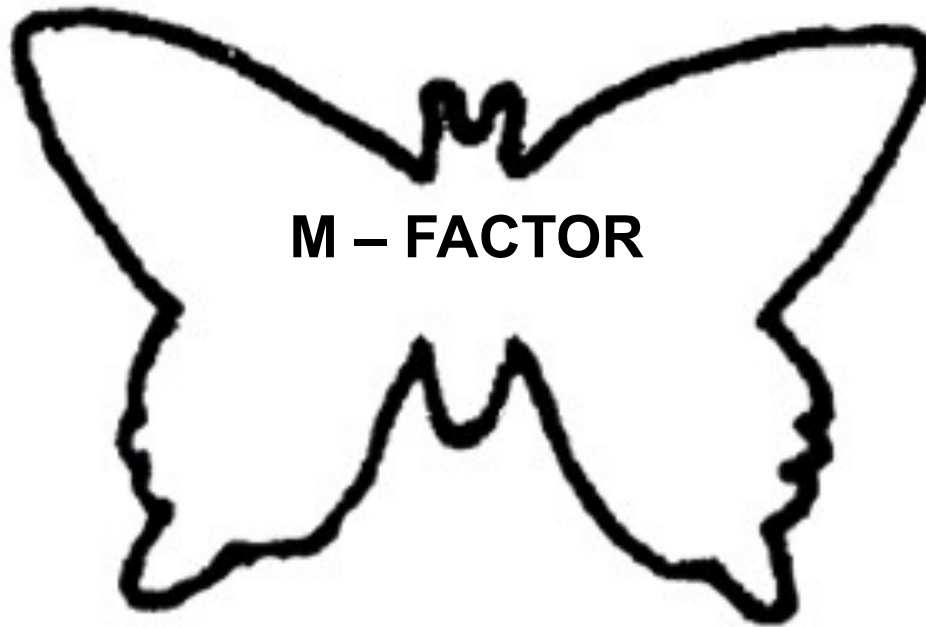
LS₂

LS₃

LS₄

CLIN

M – FACTOR



DMM: The M(ultilingualism)-Factor in multilingual proficiency/development

new skills (language-specific and non-language specific) contribute to **metasystem in multilinguals**

prior linguistic, metalinguistic and metacognitive knowledge influence further language learning (2nd foreign language)

key factor: meta/multilingual awareness

DMM: Paradox of Transfer

influence between languages can also lead to cumulative and non-predictable effects

- overall increase in achievement in language learning (Griessler 2001; De Angelis & Jessner 2012; Hofer 2015)
- Common underlying proficiency (Cummins; Kecsecs & Papp 1998)
- evidence from research on TLA and artificial language learning (eg Kemp 2007): expert language learners outperform less experienced learners (also recent work by Naswihi 2021; Nation & Mc Laughlin 1986)

key factor: metalinguistic awareness

Metalinguistic awareness

crucial role in the following domains of the multilingual system:

✓ linguistic development in general

AND

✓ development of

- cognitive
- metacognitive
- information-processing abilities
- literacy skills

Metalinguistic awareness in mono-, bi-, multilingual children

- The knowledge and control children have over their own thinking and learning activities (Cross & Paris 1988: 131)
- monitoring and control of thought
- metalinguistic awareness= the ability to think about and reflect upon the nature and functions of language

Karmiloff-Smith et al. (1996: 198):

Metalinguistic awareness involves conscious reflection on, analysis of, or intentional control over various aspects of language - phonology, semantics, morphosyntax, discourse, pragmatics - outside the normal unconscious processes of production or comprehension. In other words, beyond their mastery of language use, *children gradually form explicit representations of various ways in which language functions.*

Metalinguistic awareness in bi/multilingual children

The development of MLA is seen as a predictor of general cognitive development in **mono**lingual children and seems to develop to a higher level in **bi- and multilingual** children (Bialystok e.g. 1991; etc; Bialystok and collaborators in recent publications; Stavans and Jessner 2022; Pinto et al. 1990)

Metalinguistic awareness in bi/multilingual children

Differences and similarities between two systems concerning

- linguistic form
- form and meaning
- categorisation of words into parts of speech
- explanations why a word has a particular function

(Ianco-Worrall, RiccardelliBialystok et al.; see also Cenoz 2003 for a review; Jessner 2019)

Vygotsky (1962: 110): A child “can transfer to the new language the system of meaning he already possesses in his own. The reverse is also true – a foreign language facilitates mastering the higher forms of the native tongue.”

Ian Worral (1972)

study of English – Afrikaans bilingual children
earlier stage of 2-3 (!) years semantic
development of bilingual children

similar results:

Jessner (to appear)

study of trilingual Ladin kindergartens (4.5.-6.5.)

---- > transfer of linguistic to cognitive level

Metalinguistic awareness in emergent multilingualism

- language choice in young children

Navracsics (March 2022)

3.5 years study of trilingual (Persian/English/Hungarian) children
age 1:10 and 2:11:

high level of children's multilingual awareness from the start of their exposure to the L3

they never used an English or a Persian word in the Hungarian monolingual environment (which later became their dominant language)

Metalinguistic awareness in emergent multilingualism

- language play

Cekaite (March 2022)

Children's multilingual creativity in language play can be employed for the social purposes of teasing and verbal dueling in peer groups where children belong to various linguistic and ethnic groups (Evaldsson, 2005; Lytra, 2007; 2009)

Components of multilingual awareness

- **Metalinguistic awareness (MeLA)**

set of skills/abilities which develop owing to prior linguistic and metacognitive knowledge influences further language learning

- **Crosslinguistic awareness (XLA)**

(tacit and explicit) awareness of the interaction between language systems

(Jessner 2006; 2018, 2019)



relationship between MeLA & XLA

- appear difficult to disentangle
- interact
- both exert influence on the organization of the multilingual mental lexicon

XLA can be defined as the **awareness** (tacit and explicit) of the **interaction between the languages** in a multilingual's mind, **MeLA** adds to this by **making objectification possible**

TAP example

*I hope that the next term will bring I qualche lezione
egualmente interessante [a course which is equally
interesting] will bring some, hmmm, courses – with
one s? course, I can't spell this word – cour (pause)
ses with which are as interesting und wo machen wir
jetzt weiter? I hope that next term will bring some
courses which are as interesting as the ones (stresses
s) wie sagt man da?, I come quelli [like those] Plural
as ... those I made in this winter term.*

tacit/explicit (metalinguistic comments) awareness –
different levels of awareness?

Decoding an unknown language

Evidence on both MLA, XLA, CLIN within the phenomenon of transfer between the already existent linguistic systems in the interaction with the novel and unknown situation:

- *PAR LA-049 T1 Hotel: Und jetzt weiß ich immer noch nicht, wo das Restaurant ist, abgesehen davon, dass es eine wunderbare impresionant,
@eng#impression,
*@fr#impressionnant...@ger#eindrucksvoll...@ger#Impression #hat ja also eine eindrucksvolle Panoramaaussicht ähm lasati-va, oder dass es, vielleicht, dass es im, im elften Stock ist, nivelul, vielleicht *@fr#niveau,*
@eng#level, @ger#Stock (.) also ich bleibe dabei, dass es im elften Stock ist.*

TAP methodology: association flow through the subject's multilingual repertoire from one language to the other until the adequate answer is found (Jessner & Török 2017 HJAL)

Assessing multilingual awareness

Multilingual Competence Test (MCT)

(Hofer & Jessner 2019)

DMM based testing tool

target group: school children 9-12 in South Tyrol

measures young learners' awareness of structural and lexico-semantic aspects in eight different languages (curriculum based and novel)

Multilingual Competence Test

- measures children's ability to operate across a range of languages, perceive crosslinguistic similarities, and harness these latter for the decoding or processing of new, other-language material
- modelled on Pinto et al.'s (2003) MAT battery, the multilingual test procedure requires test-takers to provide comprehensive verbal explications of their crosslinguistic metacognitions

Multilingual Competence Test

- **Part I** assesses how children cope in mixed-language tasks involving their 3 curricular languages German, Italian and English
- **Part II** widens the scope and examines how children perform when new other-language material in Dutch, Danish, Swedish, Spanish, French and Ladin is added.

MC test adaptations in progress

- Hofer, B., Jessner, U., Malzer-Papp, E. and N. Szabo (in prep.) *Multi-Lingual-Competent 9-12: Multilingual competences fostered and assessed in Hungary.*
-
- Hofer, B., Jessner, U., and A. Ismail (in prep.) *Multi-Lingual-Competent 9-12: Multilingual competences fostered and assessed in Palaestine.*
-
- Hofer, B., Jessner, U., and D. Naswihi (in prep.) *Multi-Lingual-Competent 17-19: Multilingual competences fostered and assessed in Syria.*

The role of multilingual awareness in multilingual attrition processes

LAILA (linguistic awareness in language attrition) in Tyrol/Austria and LAILA-BICS (bilingual contexts) in South Tyrol/Italy

evidence of multilingual awareness counteracting attrition (Jessner et al. 2018; Jessner 2021)

Training multilingual awareness in the school context

Is it possible to enable students to develop cognitive advantages in a schooling context (with or without benefitting from an authentic multilingual situation)?



studies in school context carried out at Innsbruck University

Significant evidence of increased level of metalinguistic awareness

primary bilingual schools

Italy, South Tyrol:

- ✓ Hofer (2015): Bolzano (Italian/German/English)

Austria, North Tyrol:

- ✓ Traxl (2013): Innsbruck (Italian/German/English)

Significant evidence of increased level of metalinguistic awareness

secondary school

Austria, Vorarlberg, Tyrol

- ✓ Allgaeuer-Hackl (& Jessner 2014; Jessner 2014): Vorarlberg (Austria)
- ✓ Scharf (2014): CLIL in Innsbruck Gymnasium biology lessons in English (in addition to other languages in the curriculum)

More evidence

✓ France: Dahm (2015)

Developing cognitive strategies through *p*luralistic approaches based upon *u*nkown *l*anguages (PAUL) students develop cognitive strategies (but also explicit instruction needed)

✓ Hungary: Horvath & Jessner (2020)

Training of metalinguistic awareness positively effects writing skills (fluency) in secondary school pupils

Summary of results

Development of multilingual awareness through

- CLIL – immersion programmes (both primary and secondary level)

- explicit instruction on strategies and multilingual awareness raising in training sessions

---> *higher level of multilingual awareness and higher level of language proficiency in ALL the languages of the pupils*

The role of metalinguistic awareness in multilingual learning and use

multilingual awareness

- affects other variables
- is affected by other variables
- changes in terms of effect on other variables over time

The role of metalinguistic awareness in multilingual learning and use

- part of cognitive underpinnings of multilingualism
 - metalinguistic awareness is seen as both:
 - ✓ prerequisite for (multilingual) growth and systems maintenance
 - ✓ emergent quality of multilingual learning and development
- > relationship between metalinguistic awareness and multilingualism is one of continuous reciprocal influences with MLA propelling multilingual acquisition while at the same time also being reinforced by it (i.e. by the presence of multiple languages in the system)
(Grigorenko et al. 2000: 399)

Aronin & Jessner (2015): What can the butterfly tell us?

- metacognition in MULTI – linguals works at a higher level concerning
 - ✓ language use
 - ✓ language development

bilingual reasoning = complex

 multilingual reasoning = hypercomplex

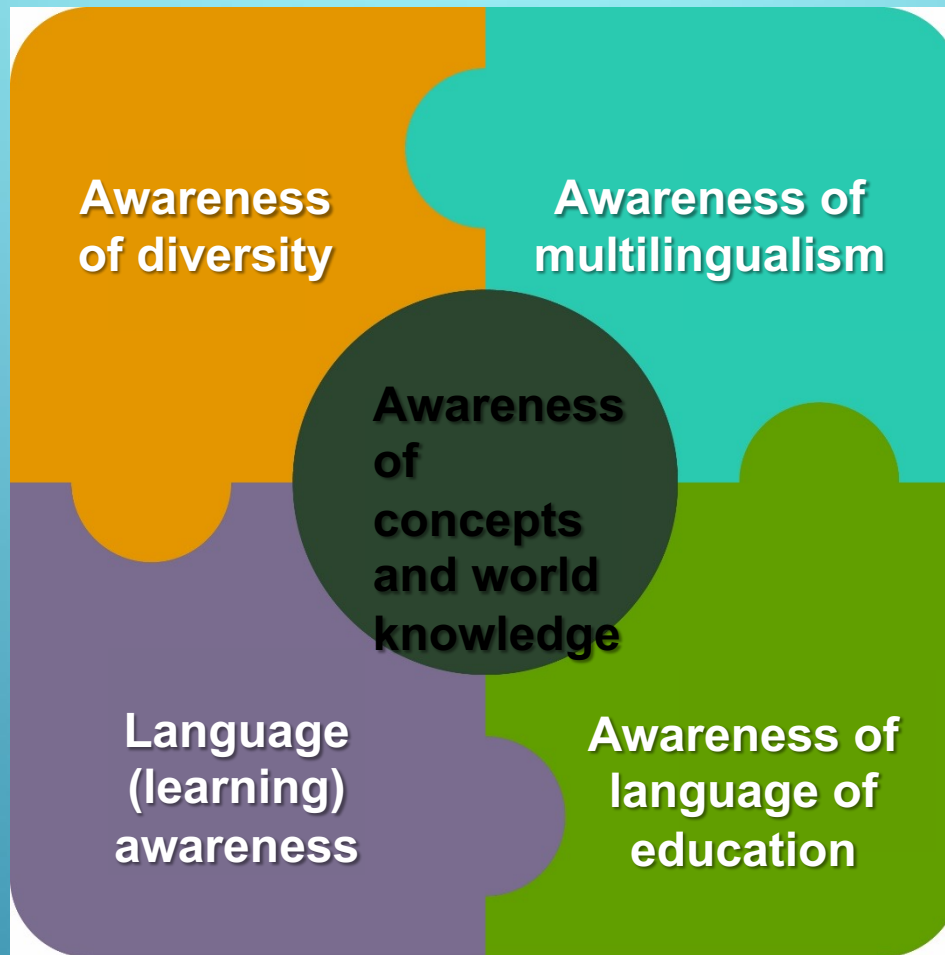
Application to education: Multilingual approaches to teaching

training of multilingual awareness

- Knowledge of languages
- Knowledge about languages
- Knowledge of multilingual development (including maintenance and attrition)
- Regulation / Control of that knowledge

in both teachers and students

5 building blocks (Jessner & Allgäuer-Hackl 2020)



recent publications

- Jessner, U. (2021) Use it or lose it! Was bleibt von den Fremdsprachenkenntnissen nach der Schule? *Zeitschrift für Interkulturellen Fremdsprachenunterricht* 26:2, 119-142.
- Allgäuer-Hackl, E., Hofer, B. und E. Malzer-Papp (2021) Ist mehrsprachiger Unterricht wirklich vorteilhaft? *Zeitschrift für Interkulturellen Fremdsprachenunterricht* 26:2, 21-47.
- Jessner, U., Allgäuer-Hackl, E. and E. Malzer-Papp (2021) Paving a new way to literacy development in migrant children: A DMM perspective. In Esther Odilia Breuer, Eva Lindgren, Anat Stavans and Elke van Steendam (eds.) *Multilingual Literacy* (pp. 97-122). Bristol: Multilingual Matters.
- Horvath, Lilla & U. Jessner (2020) Becoming multilingual in Hungary. In Batyi, S. (ed.) *Kétnyelvűség: magyar és nem magyar kontextus Tanulmányok Navracsics Judit köszöntésére. Bilingualism: Hungarian and Non-Hungarian Context. Studies in Honor of Judit Navracsics* (pp. 143-160). Veszprém: Pannon Egetem (University of Pannonia).

recent publications

- Jessner, U. & E. Allgäuer-Hackl (2020) Multilingual awareness and metacognition in multilingually diverse classrooms. *Journal of Multilingual Theories and Practices* 1:1, 66-88.
<https://journal.equinoxpub.com/JMTP/article/view/17285/20409>
- Hofer, B and U. Jessner (2019) Assessing components of multi-(lingual) competence in young learners. *Lingua*
doi.org/10.1016/j.lingua.2019.102747
- Hofer, B. und U. Jessner (2019) *Mehr-Sprachig-Kompetent 9-12: Mehrsprachige Kompetenzen fördern und bewerten*. Innsbruck: Studia Verlag.

DyME

Dynamics of Multilingualism with English

SPIEL
Sprachen im Elementarbereich



MELA –
ganzheitliche Sprachentwicklung im ladinischen Kindergarten



Land Schafft Sprache –
Tirol ist mehrsprachig



LAILA-BICS Alto Adige

Linguistic Awareness in Language Attrition
in Bilingual Contexts



LAILA –

Linguistic Awareness in Language Attriters



Der Wissenschaftsfonds.



MATEL –

Metalinguistic Awareness Test for European L



COST –

European Cooperation in Science and Technology



DYME-SEM Dynamics of Multilingualism with English
Sprachentwicklungsbeobachtung mehrsprachig



PlurCur:
Schulische Gesamtsprachencurricula



Dzākùjā!

Thank you!

¡Gracias!

Дзякую!

Dziękuję!

Danke!

Спасибо !

Merci!

Köszönöm!

Grazie

aciu!

Diakuiu!

Obrigado!