Tracking business studies students’ linguistic and conceptual development in writing: Contributions from Sociocultural theory (Vygotsky) and Systemic Functional Linguistics (Halliday)

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Learning, working and communicating in a global context, British Association for Applied Linguistics (BAAL) 47th Annual Conference, University of Warwick, Coventry, UK, 4-6 September 2014
Background

- Data from my doctoral study (2011)
- Investigated the use of dynamic assessment and Systemic Functional Linguistics in academic writing assessment
- Undergraduate business studies
- Action research
Motivation for the study: Why use SFL to explore learner ZPDs? (1)

• A large number of Vygotsky-inspired studies in applied linguistics including academic writing (e.g., Hyland & Hyland, 2006; Lantolf & Thorne, 2006; Prior, 2008; Swain, Kinnear, & Steinman, 2010; Woodward-Kron, 2004)

• Zone of Proximal Development (ZPD), defined as the distance between the actual and the potential abilities, often a focus of such research

• Lack of a systematic theory of language to track learners’ ZPDs
Motivation for the study (2)

- Dynamic assessment (DA) a case in point
- An assessment approach based on Vygotsky’s articulation of ZPD, which blends assessment and teaching together to help learners perform beyond their independent abilities
- No systematic language theory employed in previous DA studies to track learner ZPDs (Lantolf & Poehner, 2011; Poehner & Lantolf, 2013; van Compernolle & Kinginger, 2013)
- Research question: to what extent learners’ academic writing development (ZPD) can be tracked by using a systematic linguistic theory?
Theoretical frameworks (1)

• Two theories underpinning the study:
  – Vygotskian sociocultural theory (SCT) of learning
  – Hallidayan Systemic Functional Linguistics (SFL)
• Complementary to each other
Theoretical frameworks (2): Vygotskian sociocultural theory (SCT) of learning
Theoretical frameworks (3): SCT-based Dynamic assessment (DA)

- DA is based on Vygotsky’s (1978) articulation of Zone of Proximal Development and mediation

- **Definition of DA:** an “approach to understanding individual differences and their implications for instruction … [that] embeds intervention within the assessment procedure” (Lidz and Gindis, 2003 p. 99).

- **Goal of DA:** Identify learners’ ZPD and actual ability and help them to move to the next level of ZPD; focus on process and not on product; concerned with future rather than the past
Theoretical frameworks (4): Systemic functions linguistics (SFL)

Language is
(1) used for functional purposes;
(2) context-specific;
(3) used for making meaning; and
(4) a semiotic process which involves making choices (Eggins, 2004, p. 3)
Theoretical frameworks (5): SFL-based genre theory (Martin & Rose 2007)

- **Definition**: ‘staged, goal-oriented social processes’ (Martin & Rose 2007)
- Texts/genres have different **functions** in different social contexts (e.g., narration, argumentation). Such functions/purposes are realised through **register** variables - **field** (subject matter), **tenor** (reader-writer relationship) and **mode** (medium of communication).
Research context

• Open and distance learning
• Four participants from an ESP module for business studies undergraduates
• Amina, Lou, Michelle & Natasha (pseudonyms)
• Two EAL and two L1 English language speakers
Data collection methods (1)

- DA sessions designed for the study by the researcher
- DA procedure, following Haywood & Lidz (2007):

<table>
<thead>
<tr>
<th>Tutor/ Researcher</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design DA tasks and send them to the students</td>
<td>Write their response to the DA task and send it to the tutor by email Ask the tutor questions when necessary.</td>
</tr>
<tr>
<td>Using SFL-based criteria (Bonanno &amp; Jones 2007), provide formative feedback (implicit hints to explicit corrections) on student writing</td>
<td>Ask the tutor questions when necessary. Revise subsequent drafts in response to the tutor’s formative feedback.</td>
</tr>
<tr>
<td>Offer further formative feedback based on the students’ subsequent response to previous formative feedback.</td>
<td>Revise subsequent drafts in response to the tutor’s formative feedback.</td>
</tr>
<tr>
<td>Negotiate with the students on the final text.</td>
<td>Negotiate with the tutor on the final text.</td>
</tr>
</tbody>
</table>
Assessing criteria (Bonanno & Jones 2007)

• Use of source materials:
  – Selecting and evaluating the relevant information
• Structure and development of text:
  – Organising the response in an appropriate way
• Academic writing style:
  – Using language appropriate to both audience and task
• Grammar, spelling and punctuation
Data collection methods (2)

• Two assessment tasks: A STEP or SWOT analysis
• Example: Read the three case study texts about Vodafone’s broadband market mentioned above and write a SWOT analysis of this product based on the articles. Your SWOT analysis should be of about 500 words.
Data collected

• Assignments from two DA sessions from four participants over four to six months
• 16 assignment drafts in total
• Tutor mediation, student interviews, business studies tutors’ comments (NOT reported here, see Shrestha & Coffin, 2012)
• Genre: case study analysis - the study of an organisation by applying a business model or framework (Shrestha, 2011)
Analytical tools

• SFL as a textual (linguistic & conceptual) analysis tool
• The focus was on:
  – Genre – case study analysis (e.g., genre, generic stages) (Martin, 1993; Martin & Rose, 2007)
  – Conceptual development - technicality (scientific or uncommonsense knowledge as noted by Halliday and Vygotsky)
  – text design (textual meaning)
• These features were identified as needing further support (ZPDs) in DA1
<table>
<thead>
<tr>
<th>Students</th>
<th>Genres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DA1 draft 1</td>
</tr>
<tr>
<td></td>
<td>DA1 final</td>
</tr>
<tr>
<td></td>
<td>DA2 draft 1</td>
</tr>
<tr>
<td></td>
<td>DA2 final</td>
</tr>
<tr>
<td>Amina</td>
<td>Description [no link with SWOT]</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Description [no link with STEP]</td>
</tr>
<tr>
<td></td>
<td>Case study analysis [less effective than expected]</td>
</tr>
<tr>
<td>Lou</td>
<td>Case study analysis [incomplete]</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td>Michelle</td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis [incomplete]</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td>Natasha</td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
<tr>
<td></td>
<td>Case study analysis</td>
</tr>
</tbody>
</table>
Key findings (2): Generic stages of a SWOT analysis (tutor expectations)

- Orientation
- Component 1 (Strengths)
- Component 2 (Weaknesses)
- Component 3 (Opportunities)
- Component 4 (Threats)
- (Recommendations/Conclusion)
Key findings (3): generic stages

• First assignment (DA1 draft 1, unassisted performance)
  – Orientation^ Component 1^ Component 2^ Component 3^ Component 4^ (Michelle & Natasha)
  – No Orientation, Description, a few mandatory stages (Amina & Lou)
• First assignment (DA final draft, assisted) & Second assignment (DA2 draft 1 and final draft)
  – All four students included all mandatory and optional stages though at varied levels of development
Key findings (4): macro-Themes

- first paragraph of the assignment text (*following Ravelli, 2004*)

<table>
<thead>
<tr>
<th>Students</th>
<th>Number of appropriate macro-Themes</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DA1</td>
<td>DA2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Draft 1</td>
<td>Final</td>
<td>Draft 1</td>
<td>Final</td>
<td></td>
</tr>
<tr>
<td>Amina</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Lou</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Michelle</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Natasha</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Key findings (5): macro-Themes

- Amina & Lou with no macro-Theme in DA1 draft 1 and Natasha & Michelle with macro-Themes
- All other drafts with macro-Themes in all fours students’ assignments
- Example texts from Natasha (successful) & Amina’s (less successful) assignments
Key findings (6): macro-Theme in Natasha’s DA1 and DA2

DA1 draft 1

- P1 The analysis will outline how the external factors of the global beer company influenced the start of a new non-alcoholic product. Although, Heineken was producing non-alcohol beers before, there was a desirable opportunity for launching a new brand. The STEP analysis lists the circumstances of the Buckler's born.

DA2 draft 1

- P1 The purpose of this STEP analysis is to examine the external macro – environment of the usage of the safer syringes. This framework analyses the social, technological, economic and political factors, which have an impact on the presence of safety syringes.
Key findings (7): macro-Theme in Amina’s DA1 and DA2

DA1 draft 1
No macro-Theme

DA2 Draft 1

There are various ways of thinking about the business environment. Each theory helps to understand how the businesses interact with each other and with the environment. Some theories explain the changes in external environment and others focus on how businesses can become successful. One of the theories is a STEP Model, which describes the business environment by focussing on four factors as follows,

– Social
– Technological
– Economic
– Political

I am using one of the factors, social, to describe my organisation.
Key findings (9): hyper-Themes

Predict what the paragraph is about and often mark a shift in the conceptual development of the text

<table>
<thead>
<tr>
<th>Students</th>
<th>Number of appropriate hyper-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DA1</td>
</tr>
<tr>
<td>Amina</td>
<td>0</td>
</tr>
<tr>
<td>Lou</td>
<td>4 (indicated by sub-headings)</td>
</tr>
<tr>
<td>Michelle</td>
<td>3 (also indicated by sub-headings)</td>
</tr>
<tr>
<td>Natasha</td>
<td>2 out of 4</td>
</tr>
</tbody>
</table>
Key findings (10): hyper-Themes

- Less successful hyper-Themes in DA1 draft 1 (unassisted performance)
- hyper-Themes better realised in three students’ DA2 draft 1 (unassisted performance)
- Example texts from Natasha and Amina’s DA1 and DA2 draft 1s
Key findings (11): hyper-Themes in Natasha’s DA1 and DA2

**DA1 draft 1 paragraph 4 (Factor 3 - Economic)**

- **Economic factors:** Despite of Heineken has been producing non-alcohol beers mostly for non-European market before., there was no good quality non-alcohol beer in the market. Therefore the company did not have to face big competitors…

**DA2 draft 1 paragraph 4 (Factor 3 - Economic)**

- **Several economic factors have an affect on introduction of safer syringes.** One of the key factors is applying traditional syringes have high cost from economic aspects and from the aspect of personal health cost. For example, the cost of infection caused by the bloodborne pathogen can cost …
Key findings (12): hyper-Themes in Amina’s DA1 and DA2

**DA1 draft 1**
- P2 In July 2009, Google has announced the launch of new operating system, chrome, which will compete against today's most famous and trustable software company's Microsoft…

**DA1 final version**
- Strengths
- P2 As a reputable company, Google has certain advantages over its competitors. It is the most visited search engine in the world which can help market this new product effectively…

**DA2 draft 1**
- P8 At Lego land there are variety of rides and attractions for children and adults including some over 50’s attractions.

**DA2 final version**
- P8 Lego land is most popular in children and young generation for entertainment and socializing.
Key findings (13): Conceptual development

• Genre knowledge: framing the case study analysis genre using the STEP/ SWOT framework – increased genre awareness over time though differently for each student
• Generic structure and hyper-Themes developed in DA2 except in Amina’s assignment
• Technicality (business studies concepts): increasingly higher use of relevant technical terms in all four students’ DA2 draft 1
Key findings (14): technicality in Amina’s DA1 and DA2
Key findings (15): technicality in Natasha’s DA1 and DA2

Technicality - Natasha's DA1 draft 1

- Business environment: 11%
- Other business concepts: 30%
- STEP - sociological: 14%
- STEP - technological: 14%
- STEP - political: 14%
- STEP - economic: 17%

Technicality - Natasha's DA2 draft 1

- Business environment: 12%
- Other business concepts: 11%
- STEP - sociological: 20%
- STEP - political: 23%
- STEP - technological: 14%
- STEP - economic: 20%
# Examples of technicality

<table>
<thead>
<tr>
<th>Technical categories</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business environment</strong></td>
<td>Market, business environment, reclaim a share of that market</td>
</tr>
<tr>
<td><strong>STEP - sociological</strong></td>
<td>Eating habits, a healthier lifestyle</td>
</tr>
<tr>
<td><strong>STEP - technological</strong></td>
<td>Technological, specially developed fermentation process</td>
</tr>
<tr>
<td><strong>STEP - economic</strong></td>
<td>a number of economic factors, the local economies the different legislation</td>
</tr>
<tr>
<td><strong>STEP - political</strong></td>
<td></td>
</tr>
</tbody>
</table>
Conclusions and implications

- Students’ independent performance showed current abilities
- Assisted performance indicated their potential for academic writing development (i.e., ZPD)
- Targeted features of business studies writing developed further in students’ subsequent assignments, thus indicating their increasing control of the genre in question
- Tutors can systematically track students’ linguistic and conceptual development (ZPDs) when using a systematic tool like SFL
- By using SFL, they can target students’ ZPDs while providing formative feedback on their writing development instead of just focusing on surface level features in writing (e.g., grammar and punctuation)
- The combination of SCT/DA and SFL allows us to examine both the process and the product of academic writing, thus allowing to track students’ writing development systematically
- DA process tends to be labour-intensive and requires the tutor to have expertise in DA (i.e., learning-oriented assessment)
- Future academic writing research focusing on ZPD or DA can use SFL as a tool to evidence changes in student ZPDs.
THANK YOU!

Questions or comments?

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References (1)

References (2)


