Service Learning in business education

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Ass.-Prof. Mag. Dr. Peter Slepcevic-Zach
Overview

• Service-Learning
  – Value in business education
  – Definition and didactical view

• Empirical evidence

• Case Study 1: Paderborn
  – Attitudes and expectations
  – Development of the students

• Case Study 2: Graz
  – Attitudes and expectations
  – Development of the students

• Discussion
Value in business education

- Find a balance between academic rigor and practical needs for future business situations
- Business education $\Rightarrow$ transactional view of human interactions $\Rightarrow$ students develop strong material orientation
- Aspects regarding social needs are neglected
- Service-Learning as a potential solution
- Combine academic content with real life learning experience in the context of civic responsibility
Service Learning is a “competency-based, credit-bearing educational experience in which students (a) participate in mutually identified service activities that benefit the community, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility.” (Bringle/Hatcher 2012)
Learning perspective

- Combination of academic content and real life experience
- Experience refers to the specific service activity
- Service Learning as a type of experiential education
- Kolb (1984) defines learning as a “process whereby knowledge is created through the transformation of experience” (p. 41).
- Reflection important for forming abstract concepts
- Impact of service-learning depends on intensity of reflection (Godfrey, Illes & Berry (2005))
Community perspective

- Civic role of higher education
- Dewey: Democratic society only work with engaged citizens
- Dewey: Civic learning process: students are engaged in the community
- Students and the community partner build a reciprocal relationship (Brower 2011, p. 63).
Service-Learning

Service Programs (FURCO 1996)
Service Learning conceptualization

Learning process

University

Interest / motivation

Exploration of content

Reflection (learning result)

action context

action process

action result

Social problem

Problem solving

(Service) result

Service process

Community / Charitable organization

## Empirical evidence

<table>
<thead>
<tr>
<th>Study</th>
<th>Research focus on</th>
<th>Context and Methodology</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinder/ Wittek 2009</td>
<td>Effects from SL courses on civic attitudes and understanding of course content</td>
<td>Students of psychology in Germany longitudinal study (n=116)</td>
<td>Higher self-efficacy, higher civic attitudes in SL courses</td>
</tr>
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<td>Reinders 2010</td>
<td>Effects from SL on higher education processes</td>
<td>Students of teaching science Pre-Post-Design with control-group (n=116)</td>
<td>Effects for social climate and self-efficacy</td>
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<tr>
<td>Prentice/ Robsinson 2010</td>
<td>Learning-outcome from SL and Non-SL students</td>
<td>Community Colleges in USA (n=2.317) Learning-Outcomes Comparison of Means</td>
<td>GPA results: no differences; Effects in team work and civic attitudes</td>
</tr>
</tbody>
</table>
## Empirical evidence

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<td>Burns 2011</td>
<td>Effects from SL on motivation and civic engagement</td>
<td>College students in USA (n=480) Questionnaire Correlation analysis</td>
<td>Positive correlation: Benefit course and motivation for community service</td>
</tr>
<tr>
<td>Govekar/Rishi 2007</td>
<td>SL-Potential for including practical problems in the learning process</td>
<td>Business-Colleges in Amerika (n=43) Prä-Post-Design Comparison of Means</td>
<td>Effects on communications skills, and creativity</td>
</tr>
<tr>
<td>Yorio/Ye 2012</td>
<td>meta-analysis: Effects from SL on learning outcomes</td>
<td>48 studies (meta analysis)</td>
<td>Effects on social understanding, competency development, reflexion is important</td>
</tr>
</tbody>
</table>
Participating in Service Learning has positive effects on self-efficacy 
(Astin et al., 2000; Reinders and Wittek, 2009; Thomas and Landau, 2002)

Empirical studies revealed positive effects of changes in students’ self-concept 
(Potthoff et al., 2000; Reeinders, 2010; Weber and Glyptis, 2000)

Empirical studies in business education confirmed these results (e.g. Yorio & Ye 2012, Kolenko et al. 1996)

Conception of the studies: various dimensions of learning environments are not taken into consideration

lack: Link between SL-courses and their learning design patterns (teaching and methodical interventions)

credit-bearing SL-courses have stronger effects 
(Astin et al. 2000, Yorio & Ye 2012)

free decision by students for a SL-project results in higher motivation and higher academic skills (Yorio & Ye 2012)
Research Questions 1

Research questions

Attitudes and expectations of undergraduate and graduate business students prior to them attending a service activity

Ex-ante evaluation to evaluate the quality of a program before its launched (Camphel & Rozsnyai 2002, Moorer 2009)

Mixed-method – convergent parallel design (Creswell 2007)

Quantitative:
• Standardized scales (included items self-efficacy (10 items), self-concept (5 items), civic attitudes (5 items)) (Mabry 1998, Schwarzer & Jerusalem 1999, Weber & Glyptis 2006)

Qualitative:
• Problem oriented interviews (Witzel 2000)
• Qualitative content analysis in the form of structuring and thematic coding (Schreier 2012)
Research Questions 2

Research questions

How is the service learning activity related to students’ personal development?

How can the relationship between didactical design elements and the effect of students’ development be described?

Inquiry and analysis

Mixed-method – convergent parallel design (Creswell 2007)

Quantitative:
• Pre-post-design with standardized scales (included items self-efficacy (10 items), self-concept (5 items), civic attitudes (5 items)) (Mabry 1998, Schwarzer & Jerusalem 1999, Weber & Glyptis 2006)

Qualitative:
• Problem oriented interviews (Witzel 2000)
• Qualitative content analysis in the form of structuring and thematic coding (Schreier 2012)
## Research design

<table>
<thead>
<tr>
<th></th>
<th>Case study 1</th>
<th>Case study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>students groups</strong></td>
<td>Undergraduate students</td>
<td>Graduate students</td>
</tr>
<tr>
<td></td>
<td>experimental group</td>
<td>experimental group</td>
</tr>
<tr>
<td></td>
<td>control group</td>
<td>control group</td>
</tr>
<tr>
<td><strong>teaching and learning method / instructional design</strong></td>
<td>service-learning</td>
<td>service-learning</td>
</tr>
<tr>
<td></td>
<td>instructional-based</td>
<td>problem-learning</td>
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<tr>
<td><strong>quantitative data</strong></td>
<td>collection</td>
<td>questionnaire (self-report)</td>
</tr>
<tr>
<td></td>
<td>questionnaire (self-report) n = 39</td>
<td>questionnaire (self-report) n = 17</td>
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<tr>
<td></td>
<td>questionnaire (self-report) n = 18</td>
<td>questionnaire (self-report) n = 18</td>
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<tr>
<td></td>
<td>questionnaire (self-report) n = 29</td>
<td>questionnaire (self-report) n = 29</td>
</tr>
<tr>
<td></td>
<td>analysis</td>
<td>Variance and correlation analysis</td>
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<tr>
<td></td>
<td>Variance analysis</td>
<td>Variance analysis</td>
</tr>
<tr>
<td><strong>qualitative data</strong></td>
<td>collection</td>
<td>semi-structured interviews with every group t1 and t2 (n = 10)</td>
</tr>
<tr>
<td></td>
<td>semi-structured interviews with every group t1 and t2 (n = 10)</td>
<td>semi-structured group-interview t1 (n = 5) and t2 (n = 20)</td>
</tr>
<tr>
<td></td>
<td>analysis</td>
<td>Qualitative content analysis (Mayring 2010)</td>
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<td></td>
<td>Qualitative content analysis (Mayring 2010)</td>
<td>Qualitative content analysis (Mayring 2010)</td>
</tr>
</tbody>
</table>
Context Case Study 1

- Elective course
- 2nd term bachelor program business education (undergraduate students)
- 36 students
- Workshop with all organizations in the beginning
- Focus on empirical methods
- Public final presentation
- Reflection on the working and learning process
Service Learning in business administration
(6 service projects - 36 students - average age = 24.33 years)

- **Learning context**
  - Lectures
  - Counselling sessions
  - Presentation and reflection

- **Service context**
  - Social problem
  - Scientific method
  - Result

- **Example of a service project (Caritas)**
  - Development of a fundraising concept
  - Questionnaire with open questions
  - Re-design of the fundraising concept

**Didactical Concept Case Study 1**
Qualitative results - expectations

• Differences between service-learning and traditional course: moderate effect subjective learning success 
  \( F(1,53) = 9.554, p < .01, \eta^2 = .160 \)

• No other significant effects

• Expected learning success:
  – control-group: mean=3.85, sd=0.88
  – experimental-group: mean=4.56, sd=0.68

• ➔ Reasons of the service-learning students to attend the service-learning course
Qualitative results - expectations

<table>
<thead>
<tr>
<th>Scales / reasons for service learning-course</th>
<th>Subjective learning success</th>
<th>Self-efficacy</th>
<th>Self-concept</th>
<th>Attitude to be engaged</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance of practical application: For me, it is important to apply my knowledge in real-life situations</td>
<td>0.481*</td>
<td>0.205</td>
<td>-0.094</td>
<td>0.558**</td>
</tr>
<tr>
<td>Charitable aspect: For me it is important, to have the possibility helping charity organizations.</td>
<td>0.324</td>
<td>0.079</td>
<td>0.324</td>
<td>0.709**</td>
</tr>
</tbody>
</table>

correlations reasons attending service-learning course and constructs
Reasons for attending the SL course

• 29 indicators for reasons to attend the service-learning course

• 52% refer to application of knowledge in real-life situations (e.g. “For me it is definitely the practical relevance”; „The main reason was the practice-orientation.“)

• Only 6% relate to a charitable aspect („yes, it does have the social aspect and charitable organizations“; „that one also gets the chance to work with charity organizations“)
Context Case Study 2

- compulsory course
- 5th term master program business education
- 20 students
- Workshop with all organizations in the beginning
- 6 block seminars during the term
- Public final presentations
- Reflection on the working and learning process
Didactical Concept Case Study 2

Service Learning in business education and development
(6 service projects - 20 students - average age = 28.80 years)

Phases of discussion and counselling (University)
- Discussion
- Counselling sessions
- Presentation and reflection

Phases of application (charitable organization)
- Social problem
- Business topics
- Result

Example of a service project
- Home for handicapped
  - No accounting system
  - Requirements (organization and government)
  - Implementation and enrollment

Learning context

Service context

Didactical Concept Case Study 2

SIEC-ISBE Graz 2016
# Quantitative results (start of the term)

<table>
<thead>
<tr>
<th>Scales</th>
<th>mean</th>
<th>sd</th>
<th>p</th>
<th>F</th>
<th>η²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-efficacy</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>service-learning course</td>
<td>4.71</td>
<td>0.63</td>
<td>0.914</td>
<td>0.012</td>
<td>0</td>
</tr>
<tr>
<td>control group</td>
<td>4.69</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Self-concept</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>service-learning course</td>
<td>3.77</td>
<td>1.09</td>
<td>0.006</td>
<td>8.239</td>
<td>0.155</td>
</tr>
<tr>
<td>control group</td>
<td>2.96</td>
<td>0.83</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Civic attitude</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>service-learning course</td>
<td>4.81</td>
<td>0.76</td>
<td>0.487</td>
<td>0.491</td>
<td>0.11</td>
</tr>
<tr>
<td>control group</td>
<td>4.66</td>
<td>0.67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subjective learning success</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>service-learning course</td>
<td>4.93</td>
<td>0.54</td>
<td>0.16</td>
<td>5.133</td>
<td>0.102</td>
</tr>
<tr>
<td>control group</td>
<td>4.43</td>
<td>0.82</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparisons of means between service-learning course and control group.
Qualitative results (first discussions)

- Project management – focus on the organisation
  
  [...] of course we set up our own Dropbox for the group;
  [...] the first two appointments [with the organization] have already been set;
  [...] the distribution of the work load within the group was not a problem

- Students use the routines learned in their studies
  
  [...] first we did a bit of literature research
  [...] for coming up with the first ideas for the marketing concept we met and worked with the material from the marketing course – so it was really useful that I specialized in marketing for my bachelors as well as for my masters degree

- Social aspects emerged only marginally
  
  [...] only people who live below the poverty line are allowed to go there [...] but this is more than € 1,000, - [...] I am sure there are people who live on others
Qualitative results (first discussions)

- **Students criticize the lack of economic approach**
  
  [...] they still have 1.7 tons of oranges in stock, they are not selling anything and have already re-ordered 3 tons and do not even have room in the cooling chamber
  
  [...] we were told that the price was just fixed, it is far too high and this has certainly not been calculated
  
  [...] the [organization] will start in a month with this new measure, and they still do not know what products they actually offer, not to mention any calculation
### Quantitative results (2 terms, t1 – t2)

#### Subjective learning success

<table>
<thead>
<tr>
<th>Group</th>
<th>MW(t1)</th>
<th>MW(t2)</th>
<th>p</th>
<th>t</th>
<th>d_{cohen}</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>3,80</td>
<td>4,41</td>
<td>0,023</td>
<td>t(39)=-2,373</td>
<td>0,382</td>
</tr>
<tr>
<td>Control group</td>
<td>3,09</td>
<td>3,05</td>
<td>0,805</td>
<td>t(44)=0,249</td>
<td>-0,043</td>
</tr>
</tbody>
</table>

#### Self-concept

<table>
<thead>
<tr>
<th>Group</th>
<th>MW(t1)</th>
<th>MW(t2)</th>
<th>p</th>
<th>t</th>
<th>d_{cohen}</th>
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### Quantitative results (2 terms, t1 – t2)

#### Civic attitude

<table>
<thead>
<tr>
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<th>MW(t1)</th>
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<th>p</th>
<th>t</th>
<th>d_cohen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental group</td>
<td>4.75</td>
<td>5.19</td>
<td>0.003</td>
<td>t(39)=-3.149</td>
<td>0.538</td>
</tr>
<tr>
<td>Control group</td>
<td>4.77</td>
<td>4.73</td>
<td>0.716</td>
<td>t(44)=0.366</td>
<td>-0.056</td>
</tr>
</tbody>
</table>

#### Willingness for social responsibility

<table>
<thead>
<tr>
<th>Group</th>
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<th>MW(t2)</th>
<th>p</th>
<th>t</th>
<th>d_cohen</th>
</tr>
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<tbody>
<tr>
<td>Experimental group</td>
<td>4.58</td>
<td>4.92</td>
<td>0.003</td>
<td>t(39)=-3.227</td>
<td>0.54</td>
</tr>
<tr>
<td>Control group</td>
<td>4.62</td>
<td>4.35</td>
<td>0.17</td>
<td>t(44)=2.493</td>
<td>-0.396</td>
</tr>
</tbody>
</table>
Qualitative results (end of term)

• Involvement in the social organizations is an important part for the learning process
  
  […] we have had the feeling that we are totally involved in the organization; all members of the organization look after us; we are not excluded

  […] and actually after every meeting we gain more insight how this organizations works, in their corporate philosophy, their working style, what is it they want

• Confusions about the goals of the social organizations

  [The organization] have had some troubles in which direction the project should bring us together; there were also some changes during the term; they changed the range and also some goals of the project
Qualitative results (end of term)

• Strong identification with the projects
  
  [...] we actually worked a lot during this term, but it was never a burden, because I think, that we all really like this project and we have a good teamwork.

• Contact with the clients is very important
  
  [...] the project was important to all of us; we visited them [the organization] several times and we worked together with their clients; so the clients also become an important part of our project. And so, of course, the projects become more and more important to ourselves, and we really wanted to achieve a huge success for the organization and especially for the clients.
The Concept service-learning: high personal benefit

- Practice oriented
  [...] yes, it’s great when you are able to do something real, something you can present; not only case-studies or something like that; in this real project there are so much more things to think about

- Gain insight the NGOs
  [...] the hole NGO-sector, I mean, this is a huge sector of the economy, and up until this term we have had no idea about this sector

- To get to know other living environments
  [...] I think I socially learned the most; to get insight into the other side of our society, so there is more than just an economic perspective, there are also those social parts
Qualitative results (concept SL)

• Criticism
  – Elective course would be better
    […] I think that the words „compulsory course“ and voluntary social works are contradictory
  – Some projects are very difficult, require a lot of competences
    […] this projects is rather something for a sociology study
  – More coordination about the goals
    […] maybe the university should have talked more with the organization and formulate concrete goals, some kind of rulebook or guidelines for us

• Frame conditions
  – Only for master-studies
  – More then 1 term (project should last 1 year)
Classification of the findings

• Different contexts – Design and study structure basically similar
• Case study 1 and 2: SL-students expect a higher learning success
• Case study 2: SL-students assess impact on their self-image higher
• Expectation of the concept SL seems higher
• Teaching Design:
  – Preparation of the activity
  – Students need support in the service and the learning process
• Restriction: self-reports
Outlook or Food for Thought

**macro level**
- Community needs

**meso level**
- Didactical design

**micro level**
- Community / charitable organizations

- stronger awareness of students and charitable organizations for their roles needed (reciprocity)

**Didactical design**
- phases of counselling seem important for supporting the students in using curricular content during service process

**Future research**
- conceptual and empirical modeling of insights in community needs, individual position and willingness to be engaged

- context-specific measurement of self-efficacy (service process vs. learning process (Bandura 2006))

**University**
Question & Discussion

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Quantitative results

<table>
<thead>
<tr>
<th></th>
<th>$F$</th>
<th>$p$</th>
<th>$\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Effect on time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>6.99</td>
<td>&lt;.05</td>
<td>.21</td>
</tr>
<tr>
<td>Self-concept</td>
<td>13.40</td>
<td>&lt;.001</td>
<td>.34</td>
</tr>
<tr>
<td>civic attitude</td>
<td>5.91</td>
<td>&lt;.05</td>
<td>.19</td>
</tr>
<tr>
<td><strong>Effect between groups</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>4.10</td>
<td>&lt;.01</td>
<td>.44</td>
</tr>
<tr>
<td>Self-concept</td>
<td>2.86</td>
<td>&lt;.05</td>
<td>.36</td>
</tr>
<tr>
<td>civic attitude</td>
<td>.88</td>
<td>.51</td>
<td>.14</td>
</tr>
</tbody>
</table>

ANOVA

- self-efficacy ($\alpha = .87/.90$)
- self-concept ($\alpha = .83/.90$)
- civic attitude ($\alpha = .73/.73$)
### Qualitative data I: self-efficacy

<table>
<thead>
<tr>
<th>Main category</th>
<th>Problem solving</th>
<th>Exploration of content</th>
</tr>
</thead>
<tbody>
<tr>
<td>sub-categories</td>
<td>15 statements)</td>
<td>15 statements</td>
</tr>
<tr>
<td>distribution</td>
<td>(15 statements)</td>
<td>(15 statements)</td>
</tr>
</tbody>
</table>

- **Effectiveness in realm of applied methods but not with the service process itself**
- **Challenges in cooperation with the charitable organization**
- **Positive perception of group dynamic and interaction with partners**

<table>
<thead>
<tr>
<th>Service project</th>
<th>Self-efficacy t1</th>
<th>Self-efficacy t2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 n=7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 n=5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 n=5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 n=7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 n=6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 n=6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Self-efficacy t1 and t2 are compared across different service projects. The middle subjective appraisal is quantified from 1.00 to 6.00.
### Qualitative data II: civic attitude

#### Main category/distribution

- Perception of fields of activity in civic engagement area

  "...in my mind, I realized that there are citizens (...) who (. ) really rely on civic engagement." (P1 (2), 280ff)

#### Insights into charitable fields of activity (6 stat.)

#### Position about civic engagement (9 stat.)

- Personal position concerning relevance of civic engagement

  "Within the group we said, that without civic engagement, (. ) a society would not work." (P2, 360ff)

#### Willingness to be engaged

<table>
<thead>
<tr>
<th>Service project</th>
<th>Willingness-Engagement t1</th>
<th>Willingness-Engagement t2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>4.5</td>
<td>5.0</td>
</tr>
<tr>
<td>2</td>
<td>4.3</td>
<td>5.0</td>
</tr>
<tr>
<td>3</td>
<td>4.2</td>
<td>5.0</td>
</tr>
<tr>
<td>4</td>
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SIEC-ISBE Graz 2016
Educational System in Austria

- Special schools
  - Upper cycle
  - Upper Cycle
- Primary schools
  - Upper cycle
  - Upper Cycle
  - Regular secondary schools
  - VET schools
  - Pre-vocational
  - Vocational schools for Apprentices
- Secondary academic schools (lower level)
  - VET colleges
  - Secondary academic schools (upper level)
  - Compulsory Education
    - Grade Age
      - 12 11 10 9 8 7 6 5 4 3 2 1
      - Primary Education
      - Secondary Education
- Universities
  - Fachhochschulen
  - University Colleges of Education
  - Colleges
  - Post-secondary courses in VET
  - Schools & colleges for people under employment
  - (Foreperson) Master craftsperson courses
  - Berufsreifeprüfung
  - Add-on courses
Context Case Study 2

Study contents (professional and methodical competence)

Reflection on the experience (self competence)

Social problems of the region (sozial competence)