Social Media for international collaborative learning –
A case study from Palestine

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Abstract

International experience is important to prepare university students for the modern labor market in the globalized knowledge economy. While financial, societal, and political obstacles may limit students’ mobility in developing countries, using Web 2.0 and Social Media applications can enable them to engage in a virtual social learning environment to interact with peers and instructors abroad in an enjoyable, inclusive international Virtual Collaborative Learning experience. This study investigates the factors influencing Palestinian students’ perception of this experience, and explores the enhancement potential to fit the needs of developing countries. Thirty-four contextual, design, and individual factors were linked by course participants from Palestine to their reported motivation, enjoyment, and satisfaction in this new learning scenario. Recommended improvements in the design and implementation of similar arrangements are concluded from the qualitative evaluation of this empirical case study.

Keywords: Virtual Collaborative Learning; Internationalization; Web 2.0, Developing Countries; Palestine
1 Introduction

Learners in developing countries have limited access to international educational experiences due to high travel costs, strict visa regulations for many countries, political or security issues in some regions that prohibit academic visits from foreigner students and instructors, societal and traditional restrictions that reduce the mobility of certain groups like female learners, or old educational systems that tend to resist didactical modernization and organizational change. The emergence of Web 2.0 and Social Media applications empowered the development of interactive learner-centered virtual learning environments that enable collaborative knowledge building in geographically dispersed online social communities.

Technology-enhanced learning has been widely adopted to enhance learning processes and increase educational impact, including developing countries (Gulati, 2008). While classical e-learning applications focused on learners’ interaction with digital learning materials, interactive Web 2.0 applications empowered users’ contribution as a key factor (Gillmor, 2006) and opened a new horizon for more participatory learning approaches like “Online Collaborative Learning” based on successful pedagogical methodologies that have considerable educational potential (Roberts, 2004; Davies & Merchant, 2009). Modern learning environments implement Social Software to support interaction within and between groups (Selwyn & Grant, 2009), and involve individual learners in a virtual environment that emphasizes the learning experience as a “socially transmitted and situated process” (Klauser, Schoop, Wirth, Jungmann, & Gersdorf, 2004, p. 7). This paper presents the qualitative evaluation of an empirical case study of integrating Palestinian students and graduates in an international Virtual Collaborative Learning course at the Technische Universität Dresden in Germany.

In the next section, a short introduction to Virtual Collaborative Learning and its potential for developing countries will be outlined. In section 3, the study design and methodology will be presented. Section 4 presents and discusses the results and findings of the study, and the final section proposes recommendations and future research.
1.1 Virtual Collaborative Learning (VCL)

Virtual Collaborative Learning follows a project-based constructivist learning paradigm to integrate the benefits of Computer-Supported Collaborative Learning (CSCL) in the Virtual Classroom as an effective group learning environment (Hiltz, 1988). These benefits include: skills improvement, positive impact on atmosphere, positive attitude towards learning, acceptance to deal with more difficult problems, effective group dynamics, and enhanced students’ performance (Lehtinen, Hakkarainen, Lipponen, Rahikainen, & Muukkonen, 1999). Since 2001, the Chair of Information Management at the Technische Universität Dresden in Germany develops and implements Virtual Collaborative Learning arrangements in formal higher education to improve students’ professional competence, team competence, media competence, and intercultural awareness (Schoop, Bukvova, & Gilge, 2006). Through cooperation with international partner universities, students have the chance to collaborate with peers and instructors from other countries. They also gain international academic experience during their regular study program, which offers an advantage for students in developing countries who cannot travel abroad.

Developing countries can benefit from Virtual Collaborative Learning to enhance learning processes and facilitate immersive, enjoyable, high-impact learning experience. Virtual Collaborative Learning offers, in addition to the documented benefits of technology-enhanced learning for developing countries (Gulati, 2008), considerable potential to (1) increase access to educational materials and the educational experience in the virtual classroom, (2) increase cost efficiency by allowing flexible location-independent tutorial support and optimizing workload, (3) increase gender equality by enabling female learners and instructors to actively participate in the learning process in the virtual social environment from their own place, (4) increase employability by improving learners’ interpersonal and professional skills and prepare them for the modern labour market, and (5) fostering capacity building on the teachers’ side by enhancing their media competence and teaching practices (Tawileh, Bukvova, & Schoop, 2013).

2 Methodology

The purpose of this study was to investigate how Palestinian learners, as natives of an Arab developing society, perceive Virtual Collaborative Learning as an innovative approach to obtain international academic experience in their home country. In contrast to distance
learning scenarios using classical e-learning applications, they use social software to actively build and exchange knowledge with peers and instructors abroad in a virtual social learning environment. Palestinian students and graduates were invited to voluntary participate in this exploratory case study through the Center for Continuing Education at Birzeit University in the West Bank. They attended a regular international Virtual Collaborative Learning course at the Chair of Information Management in Dresden and were interviewed afterwards to evaluate their perception of this experience and the factors that affected it.

2.1 Course description

The course “Setting up the Enterprise 2.0” is part of the regular masters’ module “Blended Learning” at the Faculty of Business and Economics of the Technische Universität Dresden and is offered as a Virtual Collaborative Learning arrangement, where students from Germany work with students from international partner universities in small groups on an authentic case study to collaboratively solve a given ill-structured problem. In their self-regulated research and knowledge building activities, they intensively practice: effective virtual team work, critical thinking, problem solving, collaborative decision making, professional negotiation and presentation skills, cross-cultural communication, and English language for academic work. Thirty-seven students from five different countries participated in this course in the summer term 2012. The participants were from: University of Jyväskylä – Finland, Technische Universität Dresden – Germany, University of Latvia – Latvia, Birzeit University – Palestine, and Russian Public University for Trade and Economy – Russian Federation. Seven participants (2 Female and 5 Male) from Palestine attended and finished the course successfully.

Course participants were divided to seven groups of 3-6 members from different locations, and were assigned to predefined roles in each team. The main task was to develop an Enterprise 2.0 strategy for a fictitious multinational chocolate production and distribution company and propose modern corporate Social Media solutions to implement the developed strategy. The roles in the teams were distributed based on participants’ previous experience and preferences to increase their motivation. A closed Social Network was created on mixxt.net as a central communication platform for all participants during the course. The groups had the chance to freely choose additional Web 2.0 tools for their
virtual teamwork based on a set of recommended tools including: Skype and AdobeConnect for chat and Audio/Video conferences, trello.com for collaborative project management, primarypad.com for synchronous collaborative text editing, doodle.com for online appointment coordination, and Google Docs (now Google Drive) for online file editing and sharing. In a written team agreement, each group documented its organization and the additional Social Media tools it will use to communicate and collaborate to solve the given case study. The participants were provided with readings and e-lectures as self-study preparatory materials on: Enterprise 2.0, Blended Learning, Virtual Teamwork, Performance in the Virtual Classroom, Project Management, and Cross-Cultural Communication. After an intensive virtual collaboration phase of four calendar weeks, the final outcome for each group was a virtual presentation of their recommended solution and its rationale.

2.2 Data collection and analysis

To explore the Palestinian participants’ perception of Virtual Collaborative Learning, a qualitative in-depth interview guideline was developed to address the aspects of: previous e-learning and international experience, personal motivation to participate, course structure, teaching and learning methods, problems and difficulties, the learning environment, perceived learning impact, tutoring and support, satisfaction, and enhancement recommendations. Four of the seven Palestinian participants (2 Female and 2 Male) agreed to voluntary give evaluative, standardized, open-ended interviews on their experience in the course. This qualitative evaluation method offers an in-depth understanding of participants’ perception of a program they attended (Patton, 1990). The four interviews of 45-55 minutes were conducted in August 2012 using the online conferencing tool AdobeConnect and were recorded and transcribed with the permission of the interviewees. Smooth verbatim transcription was conducted, as it produces the original wording in a coherent understandable text (Howitt, 2010). Due to the exploratory nature of the study, the interview transcripts were coded following the inductive category formation procedure of the qualitative content analyses method using the online software qcamap.org (Mayring, 2014).
3 Results

Inductive coding of the four interview transcripts resulted in a set of thirty-four distinct categories articulating: contextual factors, design factors, and individual factors that affected the interviewees’ perception of the Virtual Collaborative Learning experience. Table 1 summarizes the categories in descending order of their absolute frequencies in the four transcripts. It also displays the number of interviews they were mentioned in (fifth column) and the categories’ frequencies according to interviewees’ gender (sixth and seventh column). The formed categories are discussed in detail with anchor examples from the interview transcripts in the following sections.

3.1 Contextual Factors

The first set of factors affecting Palestinian students’ perception of Virtual Collaborative Learning is related to their societal, environmental, academic, and professional contexts and reflects their experience with local conditions. The contextual factors coded in the interviews are described here and supported by anchor examples in Table 2.

- Culture and Society: Collaborating with students from other countries confronted the interviewees with different mentalities compared to learning/working styles (CC1) in their local society. They valued the commitment and openness of their foreigner peers they knew through this course. To motivate Palestinian full-time students to seriously participate and benefit form this experience, the need for extrinsic motivation (CC2), like granting credit points, seemed to be crucial. While Social Media was used to facilitate effective collaboration between all students and overcome gender boundaries in some contexts, it was interesting that only the two male interviewees mentioned this benefit by talking about gender restrictions (CC3) in their society.

- Local Environment: Like in other developing contexts, Limited connectivity (CL1) and unstable Internet connection seem to influence Palestinian students’ experience in the virtual classroom. This also affects the potential of these methods to overcome the limited access to international experience (CL2) mentioned by the interviewees as a motivation to participate in this course. Two participants suspected the preference for a classical teaching style (CL3) to be an obstacle to implement such interactive approaches by local
instructors, who already show a very limited use of e-learning (CL4) at their universities. This limitation increased the interviewees’ interest in this course.

<table>
<thead>
<tr>
<th>Main Theme / Code</th>
<th>Sub-category Title</th>
<th>Absolute Frequency</th>
<th>Occurs in doc.</th>
<th>F</th>
<th>M</th>
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</thead>
<tbody>
<tr>
<td><strong>Contextual Factors</strong></td>
<td><strong>Culture and Society</strong></td>
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<tr>
<td>CC1</td>
<td>Learning/working styles</td>
<td>18</td>
<td>4</td>
<td>4</td>
<td>14</td>
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<tr>
<td>CC2</td>
<td>Need for extrinsic motivation</td>
<td>7</td>
<td>3</td>
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<td>CC3</td>
<td>Gender restrictions</td>
<td>6</td>
<td>2</td>
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<td><strong>Local Environment</strong></td>
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<td>Limited connectivity</td>
<td>9</td>
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<tr>
<td>CL2</td>
<td>Limited access to international experience</td>
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<tr>
<td>CL3</td>
<td>Classical teaching style</td>
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<td>2</td>
<td>0</td>
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<td>CL4</td>
<td>Limited use of e-learning</td>
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<td><strong>Design Factors</strong></td>
<td><strong>Groups Characteristics</strong></td>
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<td>Positive peer influence</td>
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<td>Mutual peer support</td>
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<td>11</td>
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<td>DG3</td>
<td>Effective virtual teamwork</td>
<td>14</td>
<td>4</td>
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<td>DG4</td>
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<td>4</td>
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<td>Varied language skills</td>
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<td>DG6</td>
<td>Familiarity with group members</td>
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<td>4</td>
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<td>DG7</td>
<td>Need for prerequisites</td>
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<td>2</td>
<td>0</td>
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<td>Tutoring and support</td>
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<td>4</td>
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<td>DC2</td>
<td>Challenging setup</td>
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<td>DC3</td>
<td>High workload</td>
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<td>4</td>
<td>5</td>
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<td>DC4</td>
<td>Materials and roles</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>1</td>
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<td>DC5</td>
<td>Authentic case study</td>
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<td>3</td>
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<td>DC6</td>
<td>Time zone difference</td>
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<td><strong>Technology Characteristics</strong></td>
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<tr>
<td>DT1</td>
<td>Useful / Easy-to-use tools</td>
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<td>4</td>
<td>6</td>
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<td><strong>Individual Factors</strong></td>
<td><strong>Anticipated Benefits</strong></td>
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<td>Preparation for work locally and abroad</td>
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<td>4</td>
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<td>13</td>
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<td>Learning from foreigner peers</td>
<td>8</td>
<td>3</td>
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<td>IA3</td>
<td>Flexibility of online learning</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>2</td>
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<td><strong>Interest in New Experience</strong></td>
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<tr>
<td>II1</td>
<td>New people and cultures</td>
<td>17</td>
<td>4</td>
<td>12</td>
<td>5</td>
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<tr>
<td>II2</td>
<td>New educational systems</td>
<td>7</td>
<td>3</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>II3</td>
<td>New communication methods and tools</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>5</td>
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<tr>
<td>II4</td>
<td>New use of technology for learning</td>
<td>6</td>
<td>3</td>
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<td><strong>Personal Perception</strong></td>
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<tr>
<td>IP1</td>
<td>High enjoyment</td>
<td>15</td>
<td>4</td>
<td>5</td>
<td>10</td>
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<tr>
<td>IP2</td>
<td>High self-efficacy</td>
<td>13</td>
<td>4</td>
<td>5</td>
<td>8</td>
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<tr>
<td>IP3</td>
<td>Initial anxiety and confusion</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>6</td>
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<tr>
<td>IP4</td>
<td>High satisfaction</td>
<td>7</td>
<td>4</td>
<td>4</td>
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<td><strong>Learning preferences</strong></td>
<td></td>
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<tr>
<td>IL1</td>
<td>Practical knowledge building and application</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>8</td>
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<tr>
<td>IL2</td>
<td>Self-regulated learning</td>
<td>11</td>
<td>4</td>
<td>5</td>
<td>6</td>
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</tbody>
</table>

Table 1. Category frequencies in the analyzed interview transcripts
<table>
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<tr>
<th>CODE</th>
<th>Anchor examples</th>
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</table>
| CC1   | “you feel that all positions are equal, here it is not like that, we have the prestige issue and like ‘this position is better than that’” (F1)  
“usually in our culture in the Arab world, people do not believe in, I mean, the project manager or the team manager easily” (M2) |
| CC2   | “if you give credit hours for it, students will definitely come and try, because it will not be an overload for them anymore” (F1)  
“some of our colleagues were asking from the beginning ‘could I consider this as a three hours credit in Birzeit University?’” (M1) |
| CC3   | “in our Arab culture, for boys and girls to meet, is not always suitable for all” (M1)  
“sometimes gender still has, let’s say, deposits, in our Arab brains” (M2) |
| CL1   | “it was always the internet connection, because you know here in West Bank, the internet is not excellent” (M1)  
“maybe there was some disturbance because of the connection at some points” (F2) |
| CL2   | “you know for us here, it is not very applicable for one to travel and collect this experience” (M1)  
“I don’t have much international experience beside the opportunity I sometimes had through my work” (F2) |
| CL3   | “the instructors are not used to this new system, I mean they are used to the classical system” (M1)  
“I never tried it, and to be honest with you, this is much more recommended by me than to have a text book” (M2) |
| CL4   | “I work online with everybody, but I never took materials and study in an online way” (F1)  
“‘enterprise 2.0’ was the first online course for me I attend” (F2) |

Table 2. Anchor examples of the sub-categories under Contextual Factors

3.2 Design Factors

In addition to the contextual factors described above, the interviews with the Palestinian participants delivered a set of design and organization factors that affected their perception of the Virtual Collaborative Learning course they attended. These design factors are described here and supported by anchor examples in Table 3.

- Group Characteristics: All interviewees experienced positive peer influence (DG1) that encouraged them to play an important role in the team they sincerely felt surrounded by and belonging to. The multifaceted mutual peer support (DG2) in communication, coordination, and collaboration activities also strengthened this feeling of team members’ presence in the virtual classroom. This resulted in “astonishing” effective virtual teamwork (DG3) that was new and useful to the Palestinian participants. Although they found groups’ heterogeneity/multidisciplinarity (DG4) an interesting enrichment to the learning experience, the youngest Palestinian participant preferred more homogeneous groups, particularly with regards to students’ age. On the other hand, varied language skills (DG5) seemed to be noticeable but not annoying in some groups, as they overcame this through the previously mentioned strong mutual peer support. While previous familiarity with group members (DG6) should facilitate collaboration in teams, the participants were able to benefit from the predefined roles and proposed social software to promptly “break the
ice” at the beginning of the course. Only male interviewees considered the need for prerequisites (DG7) in students’ experience and language skills an important requirement for better group work in the course.

- Content and Organization: About their perception of the remote tutoring and support (DC1) provided in the course, the interviewed Palestinian participants reported a feeling of sufficient tutoring presence and instant response when needed. They were depending more on their international team to cope with the project requirements, which put them in an interesting challenging setup (DC2) they perceived as a motivating and stimulating factor. As it was an additional commitment and not part of their regular duties, Palestinian participants perceived a high workload (DC3) in the Virtual Collaborative Learning course. However, they noticed a positive effect of provided case information and predefined group composition on reducing the workload. The proposed materials and roles (DC4) saved time and enabled fast start of collaboration. Working on an authentic case study (DC5) to solve practical problems in a business scenario drew Palestinian participants’ attention as a suitable and interesting learning approach. Considering participants’ geographical distribution, the time zone difference (DC6) between their five countries caused coordination and communication issues among some members in distant countries.

- Technology Characteristics: The interviewees felt comfortable with the used Social Network and were excited to get to learn and work with the proposed useful/easy-to-use tools (DT1) for learning purposes.
<table>
<thead>
<tr>
<th>CODE</th>
<th>Anchor examples</th>
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</thead>
</table>
| DG1  | “I was happy, that they accepted the presence of another person from another culture and be their manager” (M2)  
“I was not feeling like just in a class and that's it, and I have a task to finish. No, I was finding them around me” (F1) |
| DG2  | “one corrects again for the other, so this let me sometimes work like, I help them and they help me in specific things” (M2)  
“I honestly was depending on the team. I feel it is more at my side, and it more helped me, the most support was from my team” (F1) |
| DG3  | “I was astonished, I mean at the beginning, I expected thing not to work” (M2)  
“the virtual team was more effective, maybe because all of them are far away, and everything is recorded” (F1) |
| DG4  | “It affected the course, I've seen some persons from other universities in my age, although they were at a higher level” (M1)  
“the mentality definitely differs, but that this had a negative effect, no, in opposite, it had a positive effect” (F1) |
| DG5  | “we were understanding each other very well, and were writing and all understood the group” (M1)  
“the English language of one of them was stronger than the other, so we were sometimes misunderstanding each other” (M2) |
| DG6  | “at the beginning there were few problems, because you know, persons don't know each other” (M1)  
“our first meeting was practically to know each other, we talked a bit, but we got fast to know each other” (F2) |
| DG7  | “one could not enter such a course without previous information, one needs experience, should have seen such concepts” (M1)  
“it is recommended that all participants should have a minimum level of the language to make it easier” (M2) |
| DC1  | “when you asked them, the answer was always available because they followed the questions and inquiries” (M1)  
“they were facilitators more than, let's say, educators, and they were helping us or open horizons to think and work better” (M2) |
| DC2  | “also that the team is not, like from your culture and language […] so it makes a challenge for you” (M2)  
“it was an exceptional experience, and challenging somehow […] working for late night just to finish a document” (F2) |
| DC3  | “everyone was already committed, and at the same time the course required work also” (M1)  
“it was very stressful, because at that period I was very stressed and had long working hours” (F2) |
| DC4  | “it was clear, and the tasks of my colleagues were also very clear. I felt the description very good and clear” (F1)  
“if the teams were randomly mixed, it would take a very long time till we agree and everyone talks about his interest” (F2) |
| DC5  | “how can we deal with given cases without the need to go to the market to ask and inquiry” (M1)  
“a problem in a company where there are groups, every group has a certain point of view […] this by itself was a good thing” (M2) |
| DC6  | “when in Russia the time was very late, in Germany maybe it is different. I mean each country had a time problem” (M1)  
“I’ve heard that other teams had much bigger time difference, like five six hours” (F2) |
| DT1  | “the tools we used in the VCL were altogether nicely integrated, […] we used four or five tools and benefited from them all” (M2)  
“there was no problem in using the tool. I mean it was easy and clear, an how they call it, user friendly” (F2) |

Table 3. Anchor examples of the sub-categories under Design Factors
3.3 Individual Factors

The most important aspect in this study is the subjective students’ perception of Virtual Collaborative Learning, which depends to a high degree on personal factors for each individual. The reported individual factors are described here and supported by anchor examples in Table 4.

- **Anticipated Benefits:** Both female and male interviewees considered the Virtual Collaborative Learning experience as a good *preparation for work locally and abroad* (*IA1*). It provided them with new useful skills and knowledge for future academic or professional activities. They valued the chance to deal with students and universities from “totally” new regions and enjoyed *learning from foreigner peers* (*IA2*). Although they mentioned the limited use of e-learning at their universities, they are aware of the *flexibility of online learning* (*IA3*) and they feel it benefited them in this course.

- **Interest in New Experience:** The main motivation for the interviewees to voluntary participate in this additional course was to get to *know new people and cultures* (*II1*). Another motivation was to get introduced to *new educational systems* (*II2*) they consider advanced and interesting. They goal of enhancing students’ communication skills using modern technologies was achieved by learning *new communication methods and tools* (*II3*). Implementing easy-to-use tools students usually use in their daily life for collaborative learning was a *new use of technology for learning* (*II4*) for the Palestinian participants.

- **Personal Perception:** The interviewees experienced a *high enjoyment* (*IP1*) in this course and expressed *high self-efficacy* (*IP2*) while describing their own performance. Although unclear expectations and the novelty of the experience caused an *initial anxiety and confusion* (*IP3*) for them at the beginning of the course, they achieved a good orientation after few days. They reported *high satisfaction* (*IP4*) with the whole experience and stated their intention to attend and recommend similar courses to their friends if offered again in Palestine.

- **Learning Preferences:** The constructivist approach of the Virtual Collaborative Learning course met the personal interest of Palestinian participants in *practical knowledge building*
and application (IL1). The learner-centered arrangement was an advantage for the students who prefer self-regulated learning (IL2).

<table>
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<th>CODE</th>
<th>Anchor examples</th>
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| IA1  | “it gives them some communication skills, with people they never met and they only talk to them virtually [...] I write it in my CV” (F1)  
“it's a very good experience and it also helps you in your work. That if you are thinking one day to make an international contact” (F2) |
| IA2  | “people from universities abroad, from outside the Arab world, they definitely have very valuable information and experiences” (M1)  
“I wish when I was in high school or at the university, that I entered such a course and saw like, how priorities in life are different” (F1) |
| IA3  | “because it was through the internet, and I had other subjects in the semester, so one may not be able to attend another training” (M1)  
“virtual learning is an opportunity to learn new things, for a low cost, because all what you need is your effort and a computer” (F2) |
| II1  | “besides the course content, I learned about cultures of two other countries in addition to Palestine” (F1)  
“I learned a lot about their culture, actually we became friends” (F2) |
| II2  | “they might have a better educational system than the one we have in our universities” (M1)  
“a married woman for example who has children, there is also attention for kids, there are many facilities for education and so” (F2) |
| II3  | “it introduced us to new methods and tools to communicate with others” (M1)  
“sometimes one sees some tools, but does not realize where is their right implementation” (M2) |
| II4  | “not all these tools are popular and used in Palestine, so you find tools and know them and use them, from a student perspective” (M2)  
“it was, the first time I deal with it this way, I mean for studying” (F1) |
| IP1  | “it was an enjoyable and great experience to attend this course and I benefited from it so much” (M2)  
“it is an excellent experience, productive, and in the same time, let's say, enjoyable” (F2) |
| IP2  | “I could immediately prove myself that I am able to do fulfill this mission and they accepted that” (M2)  
“when we worked they knew that, Palestinians are hard workers, competent, have analytical skills” (F2) |
| IP3  | “things maybe higher than what I expected, especially in the new management tools we got to know” (M1)  
“I felt like I have to look at many things and I am not coping with” (F1) |
| IP4  | “I wish in the future to be able to attend any similar course offered” (M1)  
“my expectations form this course were high, and what I’ve seen was also high. The performance and the method and the team” (F2) |
| IL1  | “we could, directly benefit from theoretical things we learned and apply them practically in the course” (M1)  
“this idea that you create the solution and become a part of the solution motivates for more knowledge and more interest” (M2) |
| IL2  | “I liked to explore information, instead of just receive it and the instructor gives it to you” (M1)  
“nobody gets advantages to others, everyone participated has created the solution from his point of view” (M2) |

Table 4. Anchor examples of the sub-categories under Individual Factors

A comparison between responses from female and male participants in Table 1 shows common trends in most of the mentioned factors. A variation can be noticed in the high importance of knowing new people and cultures (II12) and the proposed materials and roles (DC4) for female interviewees. On the other hand, male interviewees highlighted the
influence of gender restrictions (CC3), classical teaching style (CL3), and need for prerequisites (DG7) on their perception of Virtual Collaborative Learning.

4 Conclusions and Future Research

To explore the Palestinian learners’ perception of Virtual Collaborative Learning as a modern approach to obtain international academic experience without travelling abroad, seven Palestinian students and graduates were invited to attend an international Virtual Collaborative Learning course at the Technische Universität Dresden in Germany. A qualitative evaluation of their experience was conducted through in-depth interviews with four of the participants after the course. A set of thirty-four self-reported factors was identified and categorized in: contextual factors, design factors, and individual factors that affect the learners’ perception of the Virtual Collaborative Learning experience.

The identified contextual factors provide evidence of challenges facing the introduction of Virtual Collaborative Learning on a regular basis in a developing context, like limited implementation know-how. But they also show its potential to overcome some local barriers, like promoting gender equality (Tawileh et al., 2013). Palestinian full-time students would attend a Virtual Collaborative Learning course if offered as an accredited part of their regular study program. It is also recommended to give them access to a computer lab with high-speed Internet connection at the local university to allow effective use of synchronous communication tools like video conferencing applications. Another issue to consider is the probable unfamiliarity of students and instructors with new learning and teaching methods and technologies. This may require continuous supervision and guidance by the course organizers.

Virtual Collaborative Learning follows a project-based learning approach that requires intensive work and constant active engagement and investment of students’ efforts throughout the course (Blumenfeld et al., 1991). This can be quite challenging, but also stimulating at the same time for students used to classical learning methods. Palestinian students may need extensive preparation and detailed information on the required workload, and a focus on serious participation and peers support for a functional group work. Reduced heterogeneity (age, country, academic level) may ease the integration of Palestinian students in the groups and avoid coordination difficulties like those caused by different time zones. A technical design aspect to enhance Palestinian students’ Virtual
Collaborative Learning experience is to select appropriate collaborative tools and consider alternatives that work in the developing context. Open Source Software offer configurable, cost-effective, and provider-independent solutions for educational purposes and avoid licensing, accessibility, data protection and privacy limitations.

Like in all learner-centered scenarios, successful participation in Virtual Collaborative Learning courses depends on learners’ personal motivation and interest. Before their first participation, Palestinian students should be informed about the benefits they can gain, like knowing new people and cultures, getting prepared for the modern professional life, and getting exposed to new learning and communication methods and applications. It is important to clarify the goal and procedure of the course to avoid confusion and anxiety and stimulate students’ intrinsic motivation.

While giving an in-depth understanding of interviewees’ subjective perception of the Virtual Collaborative Learning experience, the results of this study should be seen with caution, as they are limited to the small sample size of four Palestinian respondents. Their voluntary participation in the evaluation could be motivated by their positive perception of the program, which could have biased their reflections. A further evaluation of the correlation between participants’ perception and their achievement and collaboration behavior will be conducted in future studies.

The conclusion of this empirical study demonstrates the high potential of Virtual Collaborative Learning to involve learners from developing countries in well-designed international virtual social learning environments based on affordable technology of collaborative Social Media. Enhancement recommendations proposed by the Palestinian participants and extracted from factors affecting their experience will be implemented and evaluated in upcoming courses to provide students in developing countries with international experience without the need to travel abroad.
References


