DEVELOPING GLOBAL AND VIRTUAL COLLABORATION COMPETENCE IN UNDERGRADUATE STUDENTS COURSES: EXPERIENCES FROM AN INDIAN-SPANISH-SWISS CASE STUDY

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Abstract

Global and virtual collaborations that transcend time and cultural boundaries are more and more prevalent in the business world today (Connaughton and Shuffler 2007). Working in global and virtual collaboration means to manage complex group dynamics due to cultural heterogeneity regarding different national and organizational belongings, aspects of geographical distance and computer mediated communication. Preparing undergraduate students to the complexity of collaboration in such environments poses specific methodological and didactical challenges.

In this contribution an experiential didactical concept for developing and assessing competences for successful global and virtual collaboration will be presented. The concept is based on a review of literature on intercultural and computer mediated communication competences as well as onfield experiments regarding global and virtual team dynamics. Based on the experience and a first evaluation of three collaborative student courses with teams constituting of Indo-Spain and Indo-Swiss students the concepts and implications for the teaching of global and virtual collaboration competences will be presented. Students from the Indian and from the Swiss or Spanish side had to extract divergent information regarding the cultural context in order to creatively integrate these different perspectives into one marketing concept which could be implemented in both countries. The mentioned team task addresses the most critical challenges of global and virtual team collaborations and should enable an experiential learning process by allowing a reflection on critical incidents evoked by the challenges. On the level of the secondary task reflexive and metacognitive capabilities should be developed that allow the students to adapt to the particular challenges of global and virtual collaborations.

By analysing the self-reflective assessment of unexpected events made by the students a first concept for a process-oriented assessment method for global and virtual collaboration competence could be developed. The validated course concept of combining realistic hands-on-experience with data collection and reflection can be used for further development of the concept of global and virtual collaboration competences in undergraduate student courses. Additionally the reflected experiences regarding the courses will be presented in form of guidelines for teaching such courses.

Keywords: global and virtual collaboration competence, intercultural learning, experiential learning, computer supported learning

1   INTRODUCTION

At the change of millennium, approximately 60% of the tasks arising in 2000 globally active companies were performed in distributed teams (Biggs, 2000). Global and virtual collaborations allow for the bridging of time and space boundaries by being dependent on computer mediated communication media (CMC) (Kirkman 2005; Ganesh 2008). Wright and Drewery (2006) assume that globally distributed forms of collaboration will increasingly become the norm for both industry and administrations, education and political institutions.

On the other hand compared to collocated collaborations, people that collaborate in contexts with a higher degree of geographical dispersion and a higher dependence on CMC media report more difficulties with the transmission of contextual cues and information (Cramton, 2002), more delays in feedback (Geister and Hertel, 2006), and longer interruptions or phases of silence in communication (Panteli and Fineman, 2005). To overcome such challenges it seems crucial that team members select appropriate CMC media for every single communication purpose (Dennis and Valacich, 1999; Geister and Hertel, 2006) and develop relevant competences and skills for communicating via computer mediated media (Spitzberg 2006).

The cultural diversity stemming from the globally dispersed context can impede collaboration through differences among members in their understandings and interpretations regarding tasks, the structuring of communication (Maznevski and Chudoba 2000) and events occurring in the collaboration between the actors (Dekker, Rutte, & Vandenberg, 2008). At the same time team heterogeneity creates a great potential for integrating different perspective in the resolution of complex problems on a global level and not just in multinational companies but also in educational institutions (Galbraith 2000). To achieve such an integration it seems important to effectively cope with occurring negative group dynamics like culture specific subgroup formation (Lau and Murnighan 2005) and allow for a balanced participation in such collaborations (Janssens and Brett 2006).

The complexity of collaborating in a global and virtual context increases through interaction effects between the reliance on CMC media to support the collaboration and aspects of cultural diversity influencing this communication. Studies also show that there are culture specific preferences in the choice and use of certain tools to communicate in a work setting (Kayan, Fussell et al. 2006; Setlock, Fussell et al. 2009). An exploratory study (Diamant, Fussel et al. 2008) suggest that there may be interaction effects between cultural differences on the individualism-collectivism dimension(Hofstede 1980) and tools used in regard to causal attribution of success or failure in teams. In a nutshell the review of literature in this area shows that the global and virtual context engenders particular challenges as well as opportunities for collaborations which have to be tackled by knowledgeable and skilled persons and work groups. Regarding future workplace affordances towards increased globalization and dependence on CMC media of undergraduate students it seems conducive to prepare them to upcoming challenges. In the following chapter based on an extensive literature review on existing competence models regarding collaboration, intercultural and computer mediated communication competences an integrative framework which can be used for the development of global and virtual collaboration competences in undergraduate courses is outlined.

1.1 Towards a framework for global and virtual collaboration competence

To delineate a framework for identifying global and virtual collaboration competences it seems useful to define the level of abstraction and field of application of the theoretical concept. From the review of existing competence models one can learn that an operationalization on the meso-level of abstraction allows for a feasible operationalization of learning process level competences (see Groeben and Hurrelmann 2002; Spitzberg 2006). From a perspective of external goals collaboration competences should enable an effective and smooth collaboration through skills which allow people to interact appropriately in a given global and virtual context (Spitzberg and Cupach 1984). From a personality development perspective global and virtual competences should enable students to start new collaborations with globally dispersed partners and open up their frames of reference towards a global collaboration perspective. In accordance with the definition of internal goals regarding intercultural competences made by Deardorff (2004) development goals may be specified as increased adaptability regarding different communication and collaboration styles, increased flexibility in selecting and using communication media and developing empathy as well as an ethno relative view towards globally dispersed collaboration partners (Bennett and Bennett 2004). By defining a concept which allows for external efficiency driven as well as internal development goals the concept needs to be operationalized in both general competences as well as situation or context specific assessment indicators which allow a better insight into the development of such competences (see Deardorff 2004).

To come up with a concrete definition on a meso-level of abstraction which can be used for an operationalization of general as well as specific competences it seems important to define the global and virtual collaboration context. A global and virtual collaboration context is by virtue defined by collaboration requirements between globally dispersed individuals. Collaboration can be defined by requirements regarding the interdependence of goal, outcomes as well as tasks (De Dreu 2007). Collaboration occurs in situations in which individuals strive for the achievement of interdependent

goals In a situation of goal interdependence individuals' goal achievements are positively related and individuals perceive that they can achieve their goals only through shared effort (Deutsch 1949). Such perceptions of interdependencies regarding goals can be enhanced through collective rather than individual rewards in work groups (DeMatteo, Eby et al. 1998). Teams in which goals are perceived to be interdependent share more information, have a higher propensity to learn and are more effective (De Dreu 2007). Besides interdependencies regarding goals task interdependencies play a significant role in defining collaborative processes. Collaboration processes can be differentiated from cooperation processes in which task are divided into subtask and work is done individually (Stoller-Schai 2003). Collaborative interaction requires a shared and interactive focus on task and mediated products, entrainment and synchronization of interactions between partners and some space for negotiation (Dillenbourg 1999). Collaborative tasks in a global and virtual context may be of higher complexity integrating processes of exploration and wide spread information extraction as well as decision making (Janssens and Brett 2006). From an activity theoretical perspective (Fichtner 1984) collaboration as an intersubjective symbolically mediated object orientation needs communication processes like achieving a common ground (Cramton 2001), as well as problem solving tasks as extraction of information and integration (Janssens and Brett 2006). In the context of global and virtual collaborations because of the geographical dispersion between involved sites as well as increasing travelling costs the mentioned communication processes are highly dependent on CMC media (Hertel, Geister et al. 2005).

The insight that collaboration processes are symbolically mediated through acts of communication allows an analogy to interpersonal communication competence models (Spitzberg and Cupach 1984) for developing and defining global and virtual collaboration competences. Similar to Spitzberg's (1991) concept of intercultural communication competence global and virtual collaboration competence is here preliminary conceptualized as the social evaluation of the appropriateness of communication behaviours regarding the achievement of interdependent goals in global and virtual contexts. Global and virtual collaboration competence is instantiated in specific situations through affective and cognitive appraisal of the collaborative requirements and the choice of appropriate communication behaviour to achieve interdependent goals. To understand a process in which cognitive, affective and behavioural aspects interact in the context of specific global and virtual collaboration situations process related competence models can be taken into account (Deardorff 2004; Spitzberg 2006). Through different understandings stemming from the inherent cultural diversity in global and virtual collaboration contexts evaluations of appropriate behaviours to achieve interdependent goals will often differ (Spitzberg 1991; Dekker, Rutte et al. 2008). Developing global and virtual collaboration competences thereby also means to cope with such expectancy violations (Burgoon and Hubbard 2005). Thereby such unexpected situations in global and virtual collaboration contexts may inform the definition and operationalization of a concept for global and virtual collaboration competences. In the approach presented in this contribution an explorative way for the development of a concept and the operationalization of global and virtual collaboration competences will be presented by conducting a co-evolving, project-based learning course with undergraduate students of the University of Applied Sciences Northwestern Switzerland, students of the department of management science at the IIT Madras as well as students from Spanish University.

2   COURSE CONCEPT

An interactive and project-based learning course in undergraduate education was designed to allow for achievement of external as well as internal developmental goals of the students. Regarding external goals the students should learn to behave appropriately in global and virtual contexts to allow for smooth and effective collaboration processes. Furthermore they should acquire knowledge regarding psychological aspects of marketing and product placement in different countries. This learning process should enable them to increase their personal room for manoeuvre by increased adaptability, flexibility and opening up their frame of reference and perspectives toward global problem solving (Bennett and Bennett 2004). Furthermore the course should be used to inform research about the competences needed to adapt effectively to specific challenges of global and virtual collaborations. As experiences from modern translator classes show the co-emergent perspective (Fenwick 2009) of project-based learning in which individual learners co-evolve in an authentic project context allows students to go through processes of relevant knowledge acquisition, personal meaning and sense-making individually as well as communities with peers in undergraduate education (Kiraly 2005). According to such principles of co-evolving learning processes in authentic learning environments a course was conceptualized which should enable the acquisition of knowledge regarding cultural specificities of involved markets and the collective creation of a marketing concept for a product that

should be sold in both countries. Furthermore unexpected events should be identified through a personal sense-making and reflection of the collaboration in a virtual project with students from another continent (Asia or Europe depending on the perspective).

The course already could be realized in two consecutive years between Bachelor students of Psychology at the University of Applied Science Northwestern Switzerland and Master Students of Psychology at the Indian Institute of Technology (IIT) Madras. In the first year 18 Swiss and Indian students participated in the course. In the second year 9 Swiss and 10 Indian students participated. Furthermore in the second year another course collaboration was initiated between 16 Master students of the IIT Madras and 16 exchange students at the Madrid Technical University. The Master students of the IIT Madras in both years participated voluntarily in the course, whereas the students of the University of Applied Sciences Northwestern Switzerland were enrolled in compulsory elective module on global and virtual collaborations, students of the industrial engineer grade form the Madrid Technical University. All courses were started with a phase of preparation which was led independently by the Professors working at each site, a phase of project based learning lasting for 5 weeks and an accompanying phase of self-reflection which was continued in students focus-groups after the phase of project based learning. In the following sections the phases of the course as well as specific challenges will be reported through reflection of reported experiences by the teachers as well as the students with relevant theoretical concepts from a co-evolving learning perspective (Fenwick 2009). Furthermore in collaboration with the students a concept for assessing the development of global and virtual collaboration competences could be developed which will be presented.

2.1 Priming / preparing phase

From a motivational point of view the more or less voluntary nature of participation in the courses allowed for an interested and open minded approach towards the global and virtual collaboration experience. Most students were motivated internally to learn something new regarding the fact of collaborating with people from another culture in a computer mediated context as well as externally towards the achievement of the next academic degree or possibilities for using acquired competences and the certificate for future work perspectives. From this point of view more or less similar preconditions for the students from differing countries provided a good starting point for all of the three courses.

Proposition 1: Importance of providing more or less the same preconditions regarding the balance of intrinsic motivation through voluntary participation as well as extrinsic incentives for the course between involved sites

The preparation of the students for the global and virtual collaboration experience was done more or less independently by the teachers of the involved Universities in Spain, India and Switzerland. According to the reported experiences from all involved teachers there seems to be congruence towards a culture unspecific preparation of the students before the course. Experience from the first year of the course from the Swiss side showed that a culture specific preparation for example with typical Indian management styles (Müller and Gelbrich 2003) led to the development of stereotypical expectations towards the Indian students collaboration as well as communication styles. Similarly Indian students had loads of experiences with German exchange students and developed stereotypical expectations towards the collaboration with the Swiss students. But those expectancies were not really met in the collaborative phase. Critical literature regarding the use of concepts like culture standards (e.g. Leiprecht 2008) as well as dimensional models of culture on a national level (Miller 2002) also reflect the problematic effect of early fixed stereotype building through such static cultural models. In times of economic globalization dynamic conceptualizations of culture become more prevalent (Galbraith 2000). Such dynamic conceptualization of culture understand culture more as a repository of symbols for mediating communicative actions (Kashima 2001) with possibilities for variation within subgroups of bigger aggregates as national or organizational cultures (Chao and Moon 2005). Especially in fast developing regions in East-Asia as India (Krishna, Bunnell et al. 2009) cultural identification processes seem to be more and more complex and increasingly multicultural identities seem to emerge. From the perspective of such a multi- or also bi-cultural individuals different cultural meaning making repositories can be activated in regard to specific contextual cues (Chao and Moon 2005; Sui, Zhu et al. 2007). To avoid an early stereotypical perception of the culture specific norms, rules or behaviours nowadays it seems more suitable to teach such cultural dynamics in the interplay of context, relationships and aspects of behaviour (Leiprecht 2008).

Proposition 2: Teaching cultural dynamic context related constructs to avoid stereotype development in the priming phase of such courses

The transmission of knowledge regarding the inextricable connection between meaning and context in communication and the development of differences in communication styles in context bound cultural subgroups (Hall 1977), knowledge about effects of positive beliefs regarding diversity in workgroups (van Dick, van Knippenberg et al. 2008), or knowledge about the influence of computer mediated context on communication (e.g. Anderson, Mcewan et al. 2007) as well as the influence of communication styles on media choice (Kayan, Fussell et al. 2006; Setlock, Fussell et al. 2009) seems to be more fruitful for preparing students to the specific challenges of global and virtual collaborations.

Regarding the provision and instruction for the use of CMC media the different experiences from the courses between Indian and Spanish and Swiss and Indian students enabled learning effects to occur. In the course between Swiss and Indian students a collaboration platform was provided by the Swiss university. Experiences there show that a centralized learning platform is really a good tool for providing task descriptions, uploading tasks etc. under the condition that the tool is accepted from students from the students of both universities. Such an acceptance can be increased by providing short introduction into the tool to all the students supported by professor from both sites. The experiences from the Spanish-Indian course show that students are effective in collaborating without further instructions with freeware tools available on the net and email. Furthermore during the collaboration in the Swiss-Indian course students decided to use different tools for the meetings as well as for data storage and other tasks. In regard of the facts that the choice of appropriate tools for specific communications may be one a critical part of global and virtual collaboration competence (Spitzberg 2006) as well as the socio-cultural influences on tool selection (Kayan, Fussell et al. 2006; Setlock, Fussell et al. 2009) it may be more accurate to give freedom of choice regarding tools. So far we can conclude that it seems helpful to provide a centralized platform by simultaneously providing the freedom to use other tools in such student collaborations.

Proposition 3: Provide a thorough full introduction to all the students to a centralized platform to use for information exchange by leaving the students the freedom to use different tools

2.2 Project based learning in global and virtual collaborations

In the phase of project-based learning students should be enabled to experience the specific challenges of global and virtual collaboration contexts. To experience collaboration it seems important there is a perception of interdependence regarding to be achieved goals (Deutsch 1949). To enhance this perception group-based rewards for the task were granted to the students based on the outcomes of their shared efforts (DeMatteo, Eby et al. 1998; De Dreu 2007). The task involved the development of a marketing concept for a predefined product that should be sold with the same strategy in both countries. The requirements of the task involved country specific extraction of knowledge regarding similarities and differences of the target group and the features of the product in both markets. Furthermore it entailed requirements for the integration of different perspectives in complex decision making tasks by forcing the students to make a common marketing plan and a first concept for an advertisement that should be working in both countries. The primary task addressed the most important challenges as well as opportunities of working in computer mediated context with people from different cultural backgrounds by requiring culture specific information extraction as well as integration of the information in one marketing concept (Janssens and Brett 2006). Such a complex task which furthermore requires creativity in the development of a shared advertisement should allow for the experience of the particular challenges of collaborating within a global and virtual context.

Proposition 4: Providing a task that requires culture specific information extraction and the integration of the extracted information and creativity in shared decision making processes allows for the experience of central challenges in global and virtual collaborations.

Feedback from the students as well as further experiences from project-based learning classes (Kiraly 2005) show that it seems important to allow task in authentic environments that resemble future job relevant tasks. Regarding the feedbacks of the students products like energy efficient cars, natural health supplements were seen as too diverging regarding their market requirements in both countries and made it very difficult for the group to come up with a good solution.

Proposition 5: Provide tasks that are comparable to realistic business settings to enable the students to experience authentic and realistic learning experiences

Furthermore to scaffold an effective experience of collaboration challenges in a global and virtual setting it seems important to support the students in the planning of their collaboration (see also Clark and Gibb 2006). The students were therefore first instructed to

a) Get to know each other
b) Appoint and select a team coordinator, to achieve optimal coordination of the team processes
c) Write down a project plan

This social and project coordination task should provide them the opportunity to be enabled to effectively start into the first phase of the primary task to identify similarities and differences in the target groups of the involved countries and to come up with a first segmentation of the market in the midpoint meeting after two weeks of collaboration. This meeting was set in regard to research about team dynamics which claim that the midpoint of collaboration processes are critical for the success of teams because they are experienced as transition phases regarding the understanding of team tasks, of the processes required to achieve the projected goals as well as inherent role distributions. The focus of teams changes through the perception of time pressures and accumulated information from within the team or new information from the context of the team (Gersick 1988). The role of teachers in this phase was to give an accurate feedback from the outsider perspective of an expert to enable the student teams to continue in a second phase of their collaboration. This shift of teacher towards a pedagogical expert as already mentioned in the concept of project-based learning in virtual teams by Berghoff et al. (2000) seems to be an important development which has to be made in such co-emergent project-based learning endeavors (Kiraly 2005; Fenwick 2009). In this course therefore the teacher took more of a role as an enabler or coach for learning processes to occur by scaffolding the student experiences of global and virtual collaboration processes. At the end of the course the students had to present their marketing strategies as well as the advertisements in front of their peers and the teacher expert board. Even if they were collaborating only for a period of 5 weeks astonishing results could be presented by most of the global and virtual student teams.

Proposition 6: In the project-based learning experience teacher should take over the role of enablers or coaches which scaffold the experience the student experience of global and virtual collaboration challenges

2.3   Reflective layer and assessment

To enable learning processes which foster the development of global and virtual collaboration competences it seems crucial to scaffold personal sense-making processes situated in the concrete experience of challenges occurring from an authentic experience in such collaborations. Therefore during the priming phase of such projects it seems important to develop sensitivity towards challenges stemming from the global and virtual context. Such a priming process should motivate the students to analyse contextual cues in specific situations and learn about culture specific attribution processes (Osland and Bird 2006). For the development of context sensitivity or awareness it is important that students personally try to make sense of the received inputs and open up their perspectives towards the global and virtual collaboration experience by reflection on their personal motivations. On the Swiss side students were instructed to lead a personal learning diary which should enable them to develop an open frame of reference towards global and virtual collaborations.

Proposition 7: Enabling personal sense-making processes regarding relevant knowledge inputs to allow for an open frame of reference towards global and virtual collaboration

Furthermore the students from all participating Universities were asked to develop a reflection diary to record unexpected events that occur during the global and virtual collaboration experience. The students were instructed to assess unexpected events that …

a) … where novel
b) … that derived from their behavioral and communicative expectancies
c) … that made them curious about the cultural or virtual context of their collaboration

According to Osland & Bird (2006) unexpected events as described in the expectancy violation theory by (Burgoon and Hubbard 2005) as novel or deriving from prior behavioral expectation should engender intertwined emotional as well as cognitive appraisal processes. In their theory the recognition of such trigger events which engender sense-making processes (Weick 1990) to cope with the situation are influenced by prior expertise in specific contexts, as well as the personal stance towards the specific situational context (e.g. the openness towards other cultures or towards CMC media) and the degree of curiosity. The development of an open frame of reference towards global and virtual collaborations in the priming phase of such collaborations through personal assimilation of the knowledgeable inputs about the context should enable for a more accurate appraisal of critical events which can engender learning processes. Those student diaries allowed for an insight of coping

and adaptation processes in specific global and virtual situations. Such an insight in concrete coping and learning processes allow for an identification of effective and appropriate behaviors in specific global and virtual collaboration situations. Unexpected events that were emotionally and further on reflected deeply and critically regarding aspects of cultural heterogeneity of the relations or aspects of the virtual context of collaboration or interactions between the two lead to adaptive learning processes. Such a critical reflection of the collaboration context as well as involved relationships seems to lead to better outcomes regarding adaptive learning processes towards the finding of appropriate communication behaviors. In this vein such events may help to specify the concept of global and virtual collaboration competence. In general deeper and more critical reflections of the context and the involved relationships led more often to deliberate behavioral changes and adaptations as well as to deeper reflection of the learning process (Mezirow 1990; Taylor 2007). The presented framework for classifying events and evaluating the depth of reflection (Mezirow 1990) can be used to reflect about the development of specific competences needed in global and virtual collaborations.

Proposition 8: Scaffold individual, contextual sense-making processes in global and virtual collaboration context via learning diaries to inform about appraisal, reflection and adaptation processes

Furthermore the students were instructed to summarize their learning experiences at the end of the collaboration phase of 5 weeks. Before summarizing their experiences the students were involved in reflection or focus group meetings where they were instructed to exchange their experiences. This community based learning approach (Kiraly 2005; Fenwick 2009) enabled the students to exchange their experiences and further develop their ideas regarding an effective collaboration practice in a global and virtual context. To reintegrate their experiences they were then asked in smaller groups to develop competence models for global and virtual collaboration. This engaged them in a process where they had to reintegrate their experience into theoretical concepts and rethinking their primary schemata for effectiveness in global and virtual collaboration (Kolb 1984). This learning process enabled the students to further elaborate on their schemata towards global and virtual collaboration and allowed further insights towards a conceptualization and operationalization of global and virtual collaboration competence. In a further development of the course concept it would be very interesting to integrate students into this phase of community-based experience exchange and development of refined practices. Such a community-based reflection platform would allow for an intercultural conceptualization of global and virtual collaboration competences.

Proposition 9: Community-based reflection and theoretical reintegration of the made experiences allow for refinement and grounding regarding the knowledge of needed competences for effective global and virtual collaborations

3   DISCUSSION

By following the propositions of a co-emergent learning perspective (Fenwick 2009) a structured experiences of central challenges of global and virtual collaboration could be provided to undergraduate students. The integration of didactical methods like mere transmission of knowledge, scaffolding of personal-sense making processes and community-based possibilities for exchanging experiences into global and virtual project-based learning course seems to allow for extensive individual as well as collective learning and development processes (Kiraly 2005). More specifically a general transmission of knowledge regarding the context of global and virtual collaborations as well as inherent intercultural relationships should allow for personal sense-making regarding expectancies toward the collaboration experience in the priming phase of such ventures (Weick 1990). Through scaffolding such individual sense-making processes before the start of the global and virtual collaborations via learning diaries informed frame of references can be build that prepare the students emotionally as well as cognitively towards the experience. It seems important that for the phase of collaboration the students are provided with authentic tasks which prepare them for future assignments in their work settings (Kiraly 2005). Furthermore the tasks should involve collaborative requirements so that all the students can experience the challenges of integrating different perspectives stemming from cultural diversity in a computer mediated context (Janssens and Brett 2006). Additionally through providing them methods which allow a structured sense-making and critical reflection (Weick 1990) of unexpected events stemming from the inherent cultural diversity as well as from the computer mediated context the students are allowed to experience an adaptive and transformative learning process (Mezirow 1990). For the grounding and theoretical integration of such experiences after the collaboration experience community-based learning methods are suggested. In such student based focus groups the students were always highly motivated to exchange their views

and experiences. Furthermore this community based approaches could be used to enrich their qualitative experiences with theoretical concepts on needed competences and further develop their life perspective towards global and virtual collaborations. Such a course provides the students the opportunity of learning pragmatic collaboration competences in a global and virtual setting.

Additionally such courses inform interested researchers about a new conceptualization and operationalization of global and virtual collaboration competences. Besides the already well known role shift of teachers towards more enabling functions (Berghoff, Egawa et al. 2000) in technology mediated learning courses the course provides a real opportunity for bi-directional learning in undergraduate courses (Kiraly 2005). First of all teachers of undergraduate students courses can learn from the technology expertise from so called digital natives (Prensky 2001). But even more important seems that the students through their qualitative assessment and development of competence models can inform the new scientifically as well as practically relevant construct of global and virtual collaboration competences. Even though this first concept of a process oriented, pragmatic construct of global and virtual collaboration competences is still in a very early stage the insights of the students helped to make a first step towards a better understanding of the concept as well as possibilities for operationalization. In future further research is needed in classroom as well as in business context to come up with a concept of global and virtual collaboration competences which allows for qualitative as well as quantitative of internal process oriented as well as external efficiency based assessment methods.

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