Design Research on Pedagogically Motivated Multimodal Course in English: Tools for Student Engagement Enhancing Learning Outcomes

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Abstract

This design research focuses on best practices on student engagement and learning outcomes of a pilot multimodal English course for first-year students on social field and health care at the Diaconia University of Applied Sciences, Finland. The students are provided with iPads, but the implementation of the course considers versatile devices. The 10-week blended learning course with online learning material and exercises is targeted for students not yet achieving the UAS skill requirement B1 in speaking, writing, listening and reading comprehension, vocabulary and grammar. The course aims at enhancing students' language competence and confidence. A special emphasis is put on motivation and emotions through visual design with icons, collaborative learning tasks, goal-centered learning and storytelling, in order to strengthen the basic skills required on the following field-specific and working-life oriented language course. The layout and structure familiarize international exchange programs and international professionalism by creating a storyboard centered on around the world-travel theme. Social media tools and new methods of communication (Instagram, e-cards, livestreaming, Google maps etc.) were integrated in the learning tasks, bringing a motivating and fun element into studying grammar as well as written and oral skills. Student engagement is achieved through positive self-assessment, guidance towards self-regulated learning, encouragement towards international work, peer assignments, and partly self-paced as well as collaborative learning as different groups are brought together on the same course platform. Students' learning outcome is visualized and assessed through placement test, online exercise results, peer and teacher feedback, learning diary, submitted study plan, the course exam and a questionnaire complementing the study results. The planning of the online course material was based on the notion of world citizenship, multicultural awareness and sensitivity, international professionalism, and multimedia-based learning. Using new apps in learning tasks should be well guided, otherwise they will not contribute to the learning outcomes. The learning process can be jammed by technical difficulties, lack of guidance or poor IT-skills, and it affects the self-regulatory learning outcomes and feedback given. However overcoming the obstacles brings self-confidence and encourages to use the language and social media in international environment. The learning outcomes will be evaluated and presented after piloting. In accordance, further research will focus on the adaptation of a new multimodal teaching approach and teacher role focusing more on guidance and needs-based tutoring in class.

1. Introduction

The aim of this design research is to present and develop further a pilot multimodal English orientation course with a special focus on student engagement. At the beginning of the studies, students completing a blended learning degree programme within social and health care at the Diaconia University of Applied Sciences, Finland, have a placement test in English consisting of grammar, vocabulary and writing, listening and speaking tasks. In order to promote individual study paths and strengthen language skills, an online 2-credit introduction course is targeted for students not yet achieving the European framework level B1 in English. As for challenges, students often lack not only the structures or vocabulary, but also have not been exposed to listening or speaking English, or have avoided it. This introduction course is held prior to a 3-credit professional English course in their curriculum. All students participating in the piloting were provided with iPads, but the implementation of the course considers versatile devices. Diaconia University of Applied Sciences has a mission to educate professionals for the church and society, and it operates currently on 7 campuses in Finland. According to the institution's values and pedagogical principles, emphasis is on sense of community, professional reflection and courage to encounter people on an equal basis and to act for a just world as well as to possess appropriate language and intercultural communication skills. [1, 2]

2. Student engagement

The focus of this study is on student engagement. There are multiple definitions of engagement and its interpretation. Students are individuals with their own learning needs and they need to be inspired and motivated [3]. Students have to be meaningfully engaged in learning activities through interaction with others and worthwhile tasks [4]. Student engagement can be categorized in three different types: behavioural, emotional, and cognitive [5]. Behavioural engagement shows how students behave in relation with their tasks, emotional engagement involves motivation, commitment and a sense of comfort and belonging [6]*; whereas cognitive engagement consists of effort, willingness, and cognitive resources that students invest to gain the required knowledge and skills. Accordingly we define student engagement as personal-level behavioural, emotional and cognitive engagement, since research shows that students' collaboration and interaction increase student engagement [7].

3. Course design

Our target in the course design was to support student engagement through self-regulated and collaborative learning, and therefore the course material has to be carefully planned to integrate a variety of individual and collaborative tasks in order to help to improve and practice all aspects of language skills. This challenges the course design process, because e-leaning material is typically text-based, with only written assignments and instructions. In addition, the material has to be motivating enough initiate and maintain the self-regulatory learning process and inspire students to collaborate and become active language users.

Motivation was constructed to the online learning material with two principles: versatility and contextualizing. Student engagement in the learning process can be achieved by applying the principles of cognitive-constructivist learning theories: by focusing on learners' experiences and active role in constructing information, learning by doing, and contextualising. Field specific, context-aware language learning is an especially suitable guideline in a university of applied sciences where professional skills are considered as important as academic skills. Our organisation widely operates on international development cooperation within the social and health sector, and language courses are a good opportunity to familiarize the first-year students with international project and volunteer work. An emphasis was made to prepare the material and study themes according to our international partners as well as social and health issues.

These notions affected the visual layout of the online learning material. The course material was designed on an online learning platform (Fronter). All the material and learning tasks are constructed into a closed web site with a specific structure based on the geographic maps of Finland, Europe, Africa and Asia. As students acquire language skills needed in their profession, they are virtually travelling from one geographic location into the next, within different countries and continents, training different written and oral skills as they proceed. The course material aims at improving the students' international and multicultural awareness, culturally sensitive cooperative skills, language and professional skills simultaneously.

Versatility was added by applying the principles of multimedia learning and cognitive load theory which suggest that learning is more effective when information is conveyed via multiple channels; when images are connected with audio, it makes a stronger effect on the learner's memory [8, 9]. Using multimedia enhances learning because it offers multiple ways to adapt information. The brain processes visual and verbal material in different areas of temporal memory: visually received information reconstructs images of the task at hand, while learning by hearing supports verbal understanding of it. Using both channels helps the learner to build deeper associations [10].

Our course material utilizes multimedia material used not only to illustrate but also to guide, instruct and help the students to navigate, familiarize and train the learning tasks at hand. Teachers were presented with different digital formats (video, voice recording, Adobe Voice Pro, GoAnimate, Voki). Otherwise, listening comprehension exercises covered YouTube videos that were selected to expose students to various accents and dialects. By teachers' tutored grammar sections were PowerPoint slides modified to presentations with Explain Everything and related exercises.

4. Learning tasks supporting student engagement

The principles of multimedia-based learning were not only used in the way the course material was presented or displayed; it was a key idea behind many of the learning tasks. Multimedia was incorporated into the assignments by making the students use different social media tools to create multimedia material. Since the language curriculum requires students to master social media tools in their profession, this was a good way to combine field-specific language learning with basic professional skills.

As for social media tools and new methods of communication introduced on the course, the task included presenting and commenting students' own communities in Instagram, sending an e-card, a collaborative Q&A discussion board on patient-/customer situations, using GoogleMaps and livestreaming for giving directions. A separate instant messaging tool Fronter Messenger was used in order to practice communication in English, foster grouping, enhance a feeling of community and teacher presence.

Vocabulary exercises included a collaborative assignment using web dictionaries, making personal Popplet mindmaps, Quizlet exercises, and collaborating on interactive Thinglink images such as tagging anatomy vocabulary on body images.

Reading comprehension based on authentic material and e-magazines and was mainly independent work. Vocabulary was thematically covered to offer basic vocabulary within the fields of study. The exercises were partly shared with all students.

Oral tasks in pairs included structured questions and phrase-based dialogues, small talk, talking on the phone, free conversation on set topics and interviews. Students were also asked to record their own free speech (for example making oral summaries of blog entries) and reading pre-chosen texts aloud. Students were encouraged to use online video conferencing applications.

These types of tasks engage students by requiring them to actively work on their skills: they are expected to search for relevant information, construct verbal and visual patterns and combine their existing language skills and personal experiences with new, field specific information and professional context.

5. Guidance and teacher tutoring experiences

Five groups of approximately 20 students in each participated in the pilot course, and the groups were supervised by four English teachers on different campuses. A 10-week course length was considered optimal. In blended learning, distance learning and face-to-face sessions at campus alternate. The course was introduced to the students on the first face-to-face tutoring, 3 – 4 sessions in total, and additional Adobe Connect Pro sessions were held during the course.

The course starts with a video tutorial presenting the framework and structure. A suggested weekly study plan was to be filled, but student progress was shown to fellow students as an online Excel with tasks completed. The various tasks were produced mainly with Fronter test tools enabling self-correction, whereas teacher-led feedback was also given on various tasks students submitted. In the piloting each teacher chose the assignments he/she assessed. As the course design presumes student autonomy and self-regulated learning, teachers were confronted with the adaptation of a new multimodal teaching approach. The teacher role focusing more on guidance and needs-based tutoring in class may have confused the students as well as the teachers. However, this is parallel with the pedagogical framework in contemporary blended teaching applied in higher education offering new learning experiences for the teacher.

Deadlines for students were flexible, which was positive in students' point of view, but challenged teachers. Simultaneously held courses and the same learning platform allowed desired collaboration with colleagues; nevertheless did not succeed in all aspects, such as sharing ideas and co-planning. Cooperation, distant team teaching and shared materials enable fruitful co-developing, which was valued. Multiple groups on the same platform hindered the interaction between the teacher and the group; as the information channel Fronter Messenger was one of the options used in order to enhance teacher presence and to promote instant messaging in English, but rather failed during the course.

As a teacher experience, the course challenged with a stronger role as an instructor and coach, rather than a traditional teacher. This was experienced differently, but mainly positively.

Continuous student feedback was collected via TodaysMeet; learning diaries and general feedback on all study modules was collected of the academic year.

6. Discussion

The piloting in question offers a best-practise model for other language courses in our university of applied sciences. Cooperation and sharing among teachers and IT and blended learning pedagogy experts challenges, but also enables desired change in working culture. A pedagogically motivated course model with multimedia online material, needs-based teacher tutoring in online sessions, face-to-face and through chosen teacher-student communication channel; these combined, at its best, offer a balanced concept for desired learning outcomes and a basis for developing the implemented course within the institute as well as contributing in a wider community.

The options for assessing gained learning outcomes are various: the placement test, students' learning diaries, a table of tasks completed and an optional final exam. The data will be analysed with focus on student engagement (time used, motivation, challenges, emotions) and learning outcomes. The learning outcomes will be compared with the results of the placement test.

Using social media and new applications to motivate student collaboration and self-regulatory learning is effective and fun, but simultaneously it carries a high risk. The learning situation should be well guided and structured enough, otherwise the students see no point in the assignments and their learning process is disturbed with technical and contextual confusion.

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