

TEACHING WITH TINY ARTICLES AS AN APPROACH TO STIMULATE TRUSTFUL AND COOPERATIVE LEARNING

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Abstract

The current Corona crises demonstrates the challenge of a fruitful and trustful learning dynamics among people with largely varying backgrounds. The dynamics may easily lead to separating people into groups with attributed properties which finally impairs the learning process. In this study we aimed at designing a new teaching concept for first grade bachelor students in pedagogics, psychology and sports science visiting a lecture on „Learning and Working Strategies “. This included to integrate the students from largely varying background in one teaching program. In order to achieve this goal, we created a novel format of a simplified scientific publication (e.g., a journal paper), called Tiny Article. We asked the students to write a weekly Tiny Article based on their thoughts about the lectures. By writing and sharing their weekly Tiny Article, the students learned to formulate their reflections and insights as well as to share and complement their understandings in a virtual *common brain*. This collection of knowledge, ideas and reflections were also shared with the teachers of the lectures and opened the discussion of possibilities for networked learning and working in mixed teams.

Keywords: *Common brain, tiny articles, cooperative learning, learning dynamics, shared reflections.*

1. Introduction

In the last two years the way of teaching has fundamentally changed. The learning process is increasingly challenged by a world which is becoming more uncertain and complex (LeBlanc, 2018; Waller et al., 2019). With the dominant use of digital learning techniques also new opportunities showed up such as the use of digital learning tools. With video conference tools like Zoom it becomes easy to create subgroups for collaborative learning. In this study we aimed at designing a new teaching concept for supporting cooperative learning of first grade bachelor students in pedagogics, psychology and sports science visiting a lecture on „Learning and Working Strategies “. This included to integrate the students from largely varying background in one teaching program. The goal was to enable students to document their reflections on the lectures and to share and comment on their mutual insights.

2. Methods

In order to achieve this goal, we created a novel format of a simplified scientific publication (e.g., a journal paper), called Tiny Article. This idea was inspired by the app Blinkist, which provides short summaries of books in a number of so-called *blinks*. In each blink one key message is presented in a short text. We adapted the concept of a blink to a Tiny Article by limiting the length of the short text to up to 1000 characters, which corresponds to about one-minute reading time. Additionally, the Tiny Article was complemented by a title (with max. 100 characters), an optional figure (e.g., an image or a graph) and up to 5 citations (of other Tiny Articles, lectures or scientific publications). Each student was creating a short name (with four letters) as an identifier of the person. We used the platform Padlet to collect the Tiny Articles. Students did not need to register or login to access the platform. Also, the weekly schedule of the course and instructions were documented in Padlet.

In total, the students were divided into eight tutorial groups (A-H). The name of the real person presented by the short name was only known within the corresponding tutorial group.

We asked the students to write a Weekly Tiny Article based on their thoughts about the lectures. The content of the Tiny Article was very individual. The following questions (among others) could be addressed:

- Which key messages can be noted for future academic activities?
- What was new or interesting?
- Which associations were observed?
- Which questions remained open?

The Weekly Tiny Articles were published in a public whiteboard in padlet which could be read by all students and the presenters of the lectures. In the upcoming tutorial the students were then invited to read and comment the Tiny Article of their peers. Based on the comments provided by the peers, the Tiny Article could be revised. Additionally, in each tutorial an Essence Tiny Article was created based on the most interesting insights of the individual Weekly Tiny Article. At the beginning of the next lecture, selected Essence Articles were presented to all students.

Over the course of the teaching program students were asked to write an additional Examen Tiny Article on a self-selected scientific question. They were invited to present this Examen Tiny Article in the final lecture in breakout sessions with 6-8 students. Based on the feedback they received after presentation, all students were invited to revise and submit the final Examen Tiny Article within two weeks.

3. Results and discussion

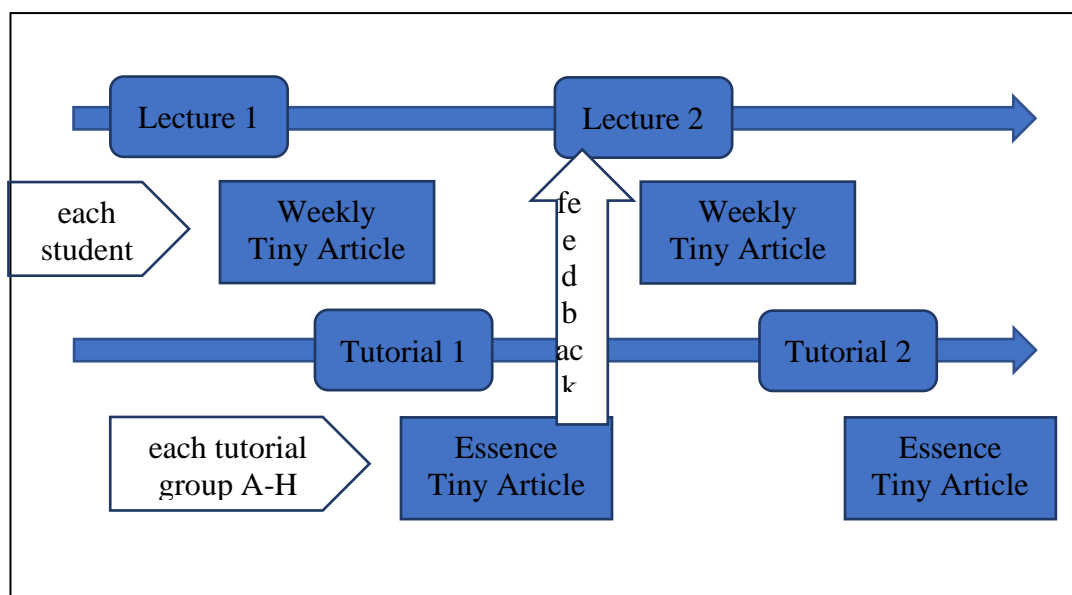
The use of Tiny Article was a new experience for the students and the lecturers likewise. At the beginning a key challenge for many students was to know what “a right” Tiny Article would be. After writing a couple of weekly Tiny Article they became more comfortable in reflecting on their learning experience. By writing weekly Tiny Article the students learned to formulate their reflections and insights as well as to share and complement their understandings in a virtual common brain contributing to a growing mindset of all participants (Hochanadel & Finamore, 2015). This collection of knowledge, ideas and reflections were also shared with the teachers of the lectures and opened the discussion of possibilities for networked learning and working in mixed teams.

The feedback provided by the students in the evaluation of the teaching program indicate following insights:

- The collaboratively developed through digitally available Tiny Articles specifically encouraged independent and cooperative learning, reading, reflection and problem solving as well as oral and written exchange about forms of scientific communication.
- The technical requirements for this teaching concept are low and the potential for transferability to other courses is high.
- The goals of the introductory phase, to inform, motivate and prepare for research-oriented studies, could be achieved through a high and almost constant participation of the students in lectures and tutorials and a high willingness to write the Tiny Articles.
- Although the courses are demanding, the respondents did not state that they were overwhelmed and the majority stated that the course had stimulated their interest and that they were encouraged to work on their own/to think for themselves.
- The digital communication and cooperation options, the support and supportive feedback offers as well as the consideration of previous knowledge were rated as very good by the majority.
- It was emphasized that through the creation of and the exchange about the Tiny Articles, the content and topics were dealt with continuously and not selectively (in the examination phase), as was previously the case.
- The conception based on Tiny Articles contributes to the students' constant examination of scientific topics and to an independent, collaborative and result-oriented learning process.
- The opportunity for teachers to view and perceive results, learning progress and learning difficulties via the Tiny Articles during the semester enables student-oriented teaching and testing.

Comparable to connectivism-based learning systems (Siemens, 2005), an open and needs-based learning environment is created that allows interaction with learners and teachers. The joint construction of knowledge and ideas enables the discussion of opportunities for networked thinking, learning and working processes in diverse teams. With this, a more conscious learning experience could be created and students were able to develop a creative and cooperative learning process based on Tiny Article and a structures review and communication process which was organized in the tutorials (peer-review) and lectures (presentation of Essence Tiny Article).

Figure 1. Learning with Tiny Articles in the lecture on “Learning and Working Strategies”. After each lecture, all students write a Weekly Tiny Article on their insights, reflection, associations and open questions. In the eight tutorials A-H, students read and comment the Weekly Tiny Articles of their peers. Based on this feedback, the Weekly Tiny Articles can be revised and the key messages from this cooperative learning process are documented in an Essence Tiny Article of the tutorial. Selected Essence Articles are then presented at the beginning of the next lecture.



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