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PERCEPTIONS OF LEARNING ACTIVITIES AND LEARNING OUTCOMES IN A ROSE (RANDOM SHORT-TERM LEARNING ENVIRONMENT)

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Background

Frequently situations arise which may cause disruptions of the academic year due to weather conditions, pollution, political unrest or military tensions. These shut downs of the educational system may routinely span a week to a few months and may encompass an institution, a region or even be nationwide (Schweber, 2013; Day, 2015). There is evidence pointing to the adverse effect that cancellation of school days has on student achievements (Marcotte & Hansen, 2010). This also applies to students in higher education where absence from courses can affect their achievements or lead to a high dropout rate from courses (Bates, 2013). Day suggests that the number of cancelled lessons can reflect badly on an institution (Day, 2015) while Schweber (2008) stresses that there are students who would like to continue with their studies even during times of crises. Finally, carrying on with the routine is an important element in coping with emergencies, can help overcome emotional difficulties and trauma (Rush, Wheeler & Partridge, 2014), and can contribute to community resilience (Cahill et al., 2005, Leykin et al., 2013). On all of these accounts, it is important to avoid depriving students of their right to learn by implementing the variety of (ICT) tools that are widely available to instructors and students alike. The main challenge is to sustain academic continuity that will lead to satisfactory learning outcomes for the benefit of all students (Schweber, 2013).

A Random Online Short-term Environment (ROSE) is an unplanned online learning environment that continues for a limited period and functions as a seamless continuation of routine face-to-face learning. A ROSE is a form of blended-learning (B-learning) that has specific features. Students study in a space which is not always suitable for learning, in which the technological resources could be limited, and the learning process can potentially be disrupted due to the fact that other members of the family are present. In addition, there might be occasional external disruptions, as the need to seek temporary shelter, electricity outages etc. In addition many of the instructors participating in a ROSE are not versed in transforming learning content to online activities. Taken together these will degrade expected learning outcomes.

The current research can provide useful insights for higher education institutes planning to practice implementation of short time online learning environments for the purpose of formalizing an effective institutional response to disruptions of the academic routine.

Summary of literature

Continuity of operations (COOP) or Business Continuity refers to an organization's ability to maintain or restore its business when normal operations have been threatened or disrupted (Piran & Yanovsky, 2007 in Schweber, 2013). Lately this concept has been dealt with in an academic context, and has been referred to as Academic Continuity which represents (ibid: 151):

> *"a commitment on the part of educational officials to provide opportunities for students and instructors to remain engaged in their education despite external disruptions and for the organization to remain resilient".*

Academic continuity is, therefore, the process of preserving the academic core functions of the institution, while responding to a wide array of challenges that temporarily disrupt teaching and learning.

One example of preserving academic continuity was the Sloan Semester that was voluntarily set up in 2005, and served as a nationwide spontaneous response devised in order to enable Hurricane Katrina- and Rita-affected higher education students to continue their studies (Lorenzo, 2008). However, attempts to hold drills in order to practice for situations in which the educational system is shut down temporarily and unexpectedly are scant. It seems that only in Singapore there was an initiative to conduct annual drills in order to practice sustaining academic continuity in event of a disruption of the academic year as a result of the SARS pandemic of 2003, (Ho Tec & Leong, 2006; Chandran, 2010).

Methodology

The online event at the teacher-training institution Ohalo College was held during the week of Hanukah in which pupils attending the K-12 educational system are on vacation, while higher education institutes continue with regular studies, thus emulating a situation in which academic routine is disrupted for a limited period. This was the third consecutive year that an online week was held at the college during the week of Hanukah. All courses went online, and there were no explicit guidelines as to the type of activity, the tools to be used or whether the activity should be synchronous or a-synchronous. We assumed that most of the activities would be asynchronous, and we saw this as an advantage as it provided a flexible studying environment for the students.

The research was a Design-Based Research (DBR). The goal of this type of formative research (Gittelsohn et al., 2006) is to improve educational practices through iterative analysis, design, development and implementation, based on collaboration among researchers and practitioners in real world settings, and to lead to contextually-sensitive design principles and

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theories (Wang & Hannifin, 2005; Anderson, & Shattuck, 2012). DBR uses formative evaluation as a research method, and utilizes many data collection and analysis methods widely used in quantitative or qualitative research (Orrill, Hannafin & Glazer, 2003).

The number of students and instructors participating in the event was 1200 and 126, respectively. In order to maximize the rate of response students completed the feedback-form in-class. The responding groups of students were selected from various departments and years of study (i.e. 1st year, 2nd year etc.) in order to attain a sample group that was representative of the student body in the college, while an online feedback form was sent to all instructors. The rate of response for students was 36% and 40% for instructors. The feedback-form consisted of statements on a 5 point Lickert scale and an open ended question regarding suggestions for improvement. In addition we interviewed students (N=7) using a semi-structured interview. We made a distinction between regular students who participated in the event in previous years and students who were in preparatory classes who had never experienced an online week, and were assumed to be unbiased towards the event due to previous unfavourable experiences or to attrition. In addition, we could follow the effect of the elaborate preparations of students and pupils in the preparatory classes ahead of the online week.

Results from 2014/2015 indicated that it could prove useful to offer the instructors guidelines for designing proportionate activities in terms of time. Consequently, before the event of 2015/2016 we designed a tentative template for planning activities based on qualitative analysis of the verbal data from the student feedback and interviews of 2014/2015. In addition, we added questions to the online feedback forms of 2015/2016 based on the above template to study the nature of the learning activities.

Our research questions were related to learning activities and learning outcomes:

- What activities were perceived by the students as preferable? How do they compare with the activities that instructors actually gave during the online week?
- What were student perceptions regarding learning outcomes?

Results

It seems quite clear that watching videos and commenting was the most popular type of activity among the students. It should be added that in the verbal comments there were students who stressed that it is important to give short videos. It seems that students also appreciated pragmatic activities and particularly those that were a revision or of material that had been taught in the face to face meetings. On the other hand, not many students appreciated new material been taught in this particular environment.

It should be noted that 50% of the responding instructors did not make use of the template when planning activities, either because they felt it was unneeded or else because they did not know how to use it. We asked the instructors to mark the type of activities that they had given and compared them to the students' preferences. The overall picture showed that that there

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were differences in perceptions between instructors and students in regard to types of activities. Only in one instance namely, activities aiming to rehearse (go over) material taught in face to face meetings, there was a correlation between student and lecturer responses (30% for instructors; 36.2% for students). There was a certain correlation regarding the use of media- 34% of the responding instructors used media (videos, audio files) while 47% of the responding students marked this kind of activities as preferable. There was a negative correlation of over 20 responses in two instances: writing a text (instructors 42%, students 8.7%) and enhancing knowledge (instructors 62%, students 24.5%).

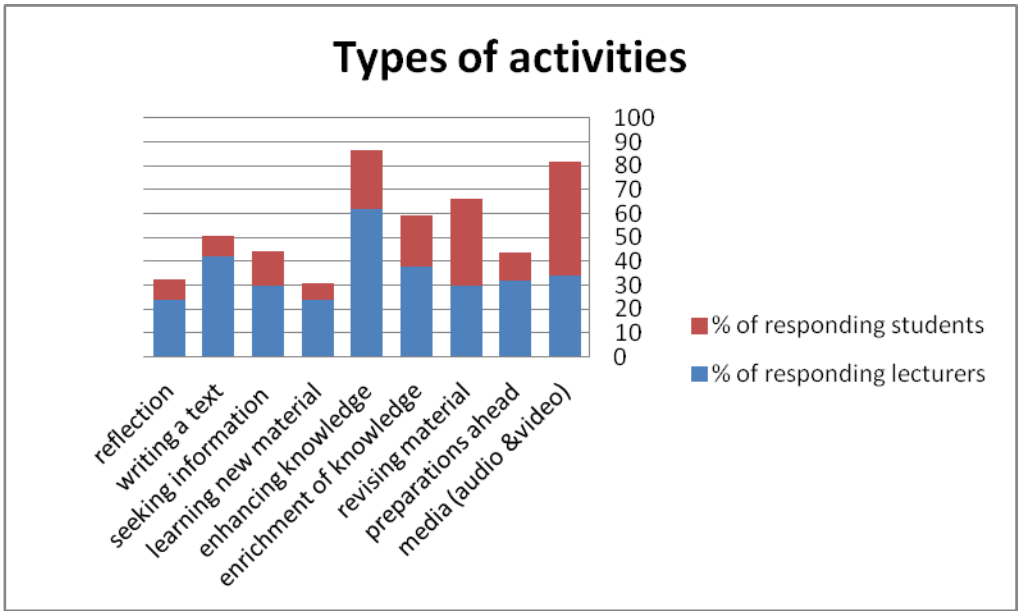

Figure 1.

As for features of favourable activities the main attribute marked by students was meaningful activities, on a personal level. In addition, students stressed the importance of activities that were proportionate in terms of the time that it took to complete an activity.

There were discrepancies between students and lectures in many of the parameters as is demonstrated in the following graph:

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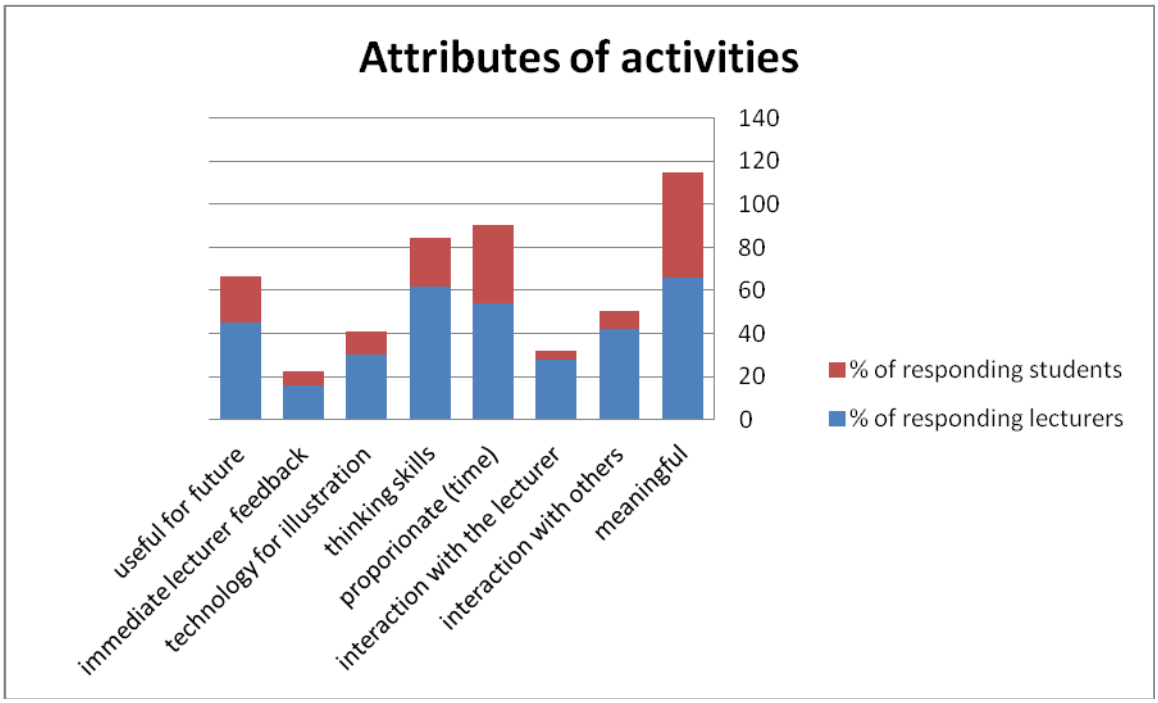

Figure 2.

In the interviews that we conducted students complained about activities that were time consuming because they could not understand what they were required to do. The term *frustration* was repeatedly used in relation to this type of activity. In addition there were activities that were to be performed in groups, however due to lack of knowledge regarding how to collaborate effectively online, they were obliged to conduct face to face meetings in order to do the work

The learning outcomes of the online week

In the results of the previous year, many students noted that they were engaged with actually finishing the activities than with really learning because of the workload: "There was no learning, my main goal was to finish everything on time, and I didn't have much time to really learn…". There were similar statements in this year's feedback. However, the quantitative data from the feedback forms and the qualitative data from interviews that were held in the current year i.e. 2015/2016 showed that the majority of students (71.5%) did not spend more than 4 hours work on the activities, this in comparison with a 6-8 hours of schedule when on-campus. Also, students that were interviewed stated that there was an improvement regarding the workload because the activities were more proportionate in terms of time.

There were three statements regarding learning outcomes on a 5 point Likert scale: learning the material, experiencing innovative learning and experiencing new technological tools. There was a slight increase in of responses to the statement: "I learnt the material well during the online week", between 2014 and 2015 for all students. 15% of the responding students fully agreed with the statement, compared to 9.3% of the students in the previous year.

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The difference between regular and preparatory students was notable on all three statements regarding learning outcomes as can be seen in the following graph.

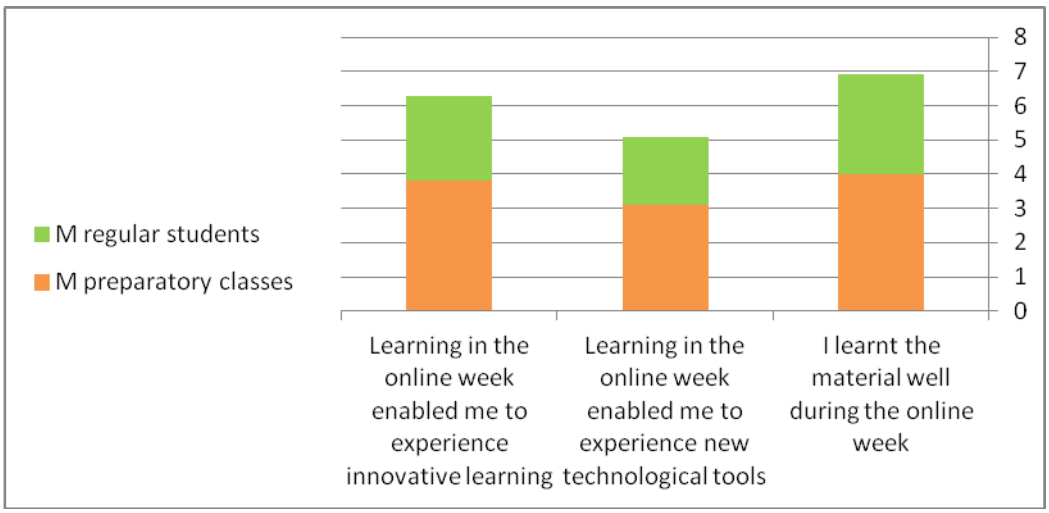

Figure 3.

Discussion

This research dealt with the results of a weeklong practice of sustaining academic activities in a random online short-term environment (ROSE) during short term interruptions due to weather, epidemics, environmental pollution or terror acts. The circumstances of such an environment have much in common with regular online or blended courses. However, we claim that because of its intensity it has unique features in terms of workload and presence of other members of the family, in addition to challenges related to the cause of interruption. This justifies practicing a ROSE in order to formalize a basic plan which could be used by institutions in real-time.

The results referring to preferable activities demonstrate the challenge in convincing students of the efficacy of the online week. It seems that many students do not believe that it is possible to learn new material in such an environment. The research indicates the preference of students to activities that involve media (particularly videos) and those that are aimed at rehearsing material dealt with in face to face meetings. As for attributes of these activities, it is notable that the most important attribute is being meaningful and interesting for the student on a personal level.

An interesting finding regards the different point of view of students and preparatory students. This can be due to attrition but also to the manner in which the head of the division carefully monitored the activities in order to ensure a variety of experiences for the students. No doubt that the role of the head of a department is important in managing a meaningful learning experience. One can argue that during an authentic ROSE the head will not be able to exercise such supervision; however, the fact that instructors have experienced the design of a variety of activities on an annual basis might have a positive effect during real time.

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We infer from responses of the regular students regarding the experience of new technological tools that in fact instructors used a limited number of these. Developing a virtual toolkit containing categories of a limited number of tools that address various pedagogical needs (Bates, 2013) could be of assistance to instructors without overwhelming them, and could deepen their ability to make use of the diverse capabilities of the available technology. It is important to keep in mind that technology is basically a tool not a goal in itself even in an online learning environment.

The discrepancies between instructors and students regarding learning activities demonstrate clearly that we have yet to learn how to narrow the gap between perceptions of instructors and students regarding this issue in a ROSE, although we believe that they are partially related to the fact that the online week is a drill. They also indicate that instructors who are not proficient in teaching in an online environment should receive more training in order to learn how to transform face to face content to meaningful online activities appropriate for a ROSE and to be able to choose technological tools best suited for these activities. Supplying the instructors with an accessible template for planning activities could possibly be of use.

Annual drills could be the key to sustaining meaningful and effective academic continuity during unexpected disruptions of the academic year, and could facilitate the formalization of an institutional plan for effectively dealing with such occurrences.

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