TEACHERS AS STUDENTS: DUALITY AS PERCEIVED BY TEACHERS AND ASPECTS OF SELF-EFFICACY IN AN ONLINE ENVIRONMENT

Michal Nachshon[1], & Amira Rom[2]
[1]Center of Stem Education, Oranim, Academic College of Education (Israel)
[2]Education and Psychology Department, the Open University of Israel (Israel)

Abstract

The success of online learning processes is linked to our ability to create strong motivation among teachers taking continuing education classes and teachers in their classrooms. Creating positive feelings and motivation to invest efforts in teaching and learning actions in teachers is depends on fostering teaching practices in areas related to the sense of belonging and feeling secure, self-efficacy and autonomy.
The aim of this study was to identify how teachers perceive their abilities in online environment in different roles: as teachers and as Students
The research was conducted among 48 teachers who participated in continuing education courses given online during the COVID-19 period. The research data were gathered by analyzing validated questionnaires. This research uses mixed methods. We conducted a quantitative analysis that included t-test. Distributions were checked and participants' answers as teachers and as students were compared.
The quantitative analysis shows that participants see themselves differently when answering as teachers and as students as far as related to the potential of an online environment and their ability to cope with it. By the qualitative findings we can see that personal experience positions participants' answers as teachers and as students in different places.
Some of the findings show that the ability to manage a class, promote students' involvement through the using of teaching practices in an online environment and with the appropriate pedagogy are the factors that reflect the degree of the teacher's self-efficacy and lead to constructive thinking that encourages teachers to develop understanding and performance promoting teaching practices.

Keywords: Self-Efficacy, mixed methods, online environment, teacher functioning.

1. Introduction

Teachers who have a strong sense of self-efficacy are open to experimenting, innovations and opportunities in nonformal teaching. As well, they are more likely to persevere longer when trying out new teaching methods in the classroom. In contrast, teachers with a low sense of self-efficacy will avoid adopting new ideas, new perceptions, and new ways of teaching. Self-efficacy influences the individual's considerations about how to behave, whether to handle a task facing them, how much effort to invest in it, and whether they believe they will succeed (Bandura,1997). Teachers who have a higher sense of self-efficacy are more prepared to adopt nonformal learning-related changes, innovations and opportunities in their work and they are more willing to try new work methods. They feel more confident about their teaching ability and perform more effectively in class. In contrast, teachers who have a low sense of self-efficacy will avoid adopting new ideas, viewpoints, and teaching methods (Kass,2012).

Characteristics of an online environment

According to the SAMR (substitution, augmentation, modification and redefinition) model (Puentedura, 2014), there are four levels of pedagogic change that result from the integration of digital technology in teaching:

- Substitution – the most basic level, in which technology does not give any added value and is used for performing a task that could have been performed without the technology.
- Augmentation – a higher level, yet the influence of technology on pedagogy is still not felt. The technology is used to broaden what exists, with the emphasis on functional improvement of a pedagogical task.

- Modification – a significant change. This level stresses the pedagogical change. The technology is not being used only as a tool that optimizes task functionality but also enables change and redesign of tasks and learning processes.
- Redefinition – the technology enables creation of new tasks, which previously could not have been performed as part of learning processes. Development of tasks in which pedagogy is redefined enables both the student and the teacher to experience a process of inquiry, given that the teacher who is also developing the task must take a great deal of factors into consideration when designing the learning process in terms of the level of change in online learning – in order to make it meet the learning objectives.

Teachers' perception

Teachers' internal beliefs play an important role in how they will use technology in their classrooms and guide their willingness to adopt changes in teaching methods.

Researchers believe that innovative technology may indeed improve teaching and learning processes, but only teachers who are "agents of change" can be the ones who realize their latent potential. To do so requires linking teachers' educational beliefs and perceptions and the way they use technology in teaching and learning (Ertmer & Ottenbreit-Leftwich, 2010).

Some studies looked at the link between teachers' technological pedagogical content knowledge (TPCK) and their view of school as a learning organization versus their opinion about the change process when assimilating new technology in school. Those studies found that the process of introducing changes in the teaching process and their implementation in school depends, to a very great degree, on the abilities and beliefs of the teacher operating as a professional pedagogical factor advancing the change in the educational system (Halverson & Smith, 2010). Three main changes in teacher functioning in an online environment were noted (Chief Scientist Office,2020). The teacher has become a facilitator and an active partner, a designer of the digital learning environment and a digitally literate teacher. To fulfil these new functions, the teacher must promote and base their knowledge and positive attitudes on online learning during their training and professional development. Taking the relevant continuing education courses, through the learning process, the teachers identified the potential for implementation of the tools that emerged from their studies. The teachers' expectations from the professional development courses were that by taking them, they would get tools to implement what they were learning.

So, the aim of this study was to identify how teachers perceive their abilities in online environment in different roles: as teachers and as Students

2. Research question

What are the participants' perceptions as teachers and as students vis-à-vis teaching- learning processes in an online environment?

3. Methodology

This research uses mixed methods. We conducted a quantitative analysis that included t-test. Distributions were checked and participants' answers as teachers and as students were compared. The research was conducted among 48 Jewish and Arabic teachers who participated in two continuing education courses given online during the COVID-19 early period.

The research data were gathered by analyzing validated questionnaires distributed to participants at the end of the courses. The questionnaires included 11 statements, six statements relating to the perception of teaching-online processes and five statements relating to the perception of learning-online processes. Each participant was asked to express their agreement with 11 statements as both a teacher and a student, using a Likert-like scale with four levels. A reliability of the internal consistency (Cronbach's alpha) was conducted for the 11 statements. Focusing on participants' views as students, $\alpha=0.706$ and as teachers, $\alpha=0.673$. A Pearson correlation was conducted between metrics to check the strength of the relationship and a clear moderate relationship was found between the metrics (0.463, $p<0.001$).

4. Results

According to Table 1, we can identify the findings related to participants' views on teaching processes on learning processes in an online environment.

When checking the finding using a t-test, it is clear that participants see themselves differently when answering as teachers and as students as far as related to the potential of an online environment and their ability to cope with it.

No significant differences were found between the Jewish and Arabic populations.

Table 1. t-test – comparison of the participants' perceptions as teachers to their perceptions as students vis-à-vis the contribution of online learning.

		Students (N=47)		Teachers (N=48)		t-test
		M	SD	M	SD	
Teachers' perceptions of the learning processes						
1a.	Difficulty in motivating students	2.11	.849	2.54	.808	-3.078**
2a.	Can make the studies relevant for students	3.36	.673	3.15	.659	(1.945*)
3a.	Difficulties in promoting collaboration among students	1.64	.845	2.13	.924	-3.163**
4a.	Based on the student's self-learning skills	3.34	.562	3.17	.601	2.069*
5a.	Responsibility for learning must be the student's only	2.24	.857	2.00	.879	(1.914*)
6a.	Preference for online learning	3.06	.861	2.19	.924	6.423***
Teachers' perceptions of the teaching processes						
1b.	The processes accommodate student diversity	2.70	.825	2.74	.642	.621
2b.	A dialogue among students can be created	3.47	.747	3.34	.731	1.353
3b.	Lack of social interaction among students	2.72	.902	3.15	.884	-2.656**
4b.	It requires more effort on the part of teachers	2.40	.970	3.40	.825	-6.2113***
5b.	Evaluation methods are reliable	2.85	.884	2.32	.862	3.314**

*(p<0.06), *p<0.05, **p<0.05, ***p<0.001

   A similar conclusion can be drawn from Figure 1, which presents an analysis of participants' answers as teachers alongside their answers as students to the same statements regarding an online environment.
   To summarize the comparison, we can see a gap between participants' answers as teachers and as students. Personal experience positions participants' answers as teachers and as students in different places.

Figure 1. Distribution of participants' perceptions of the online environment as teachers and as students (N=48).
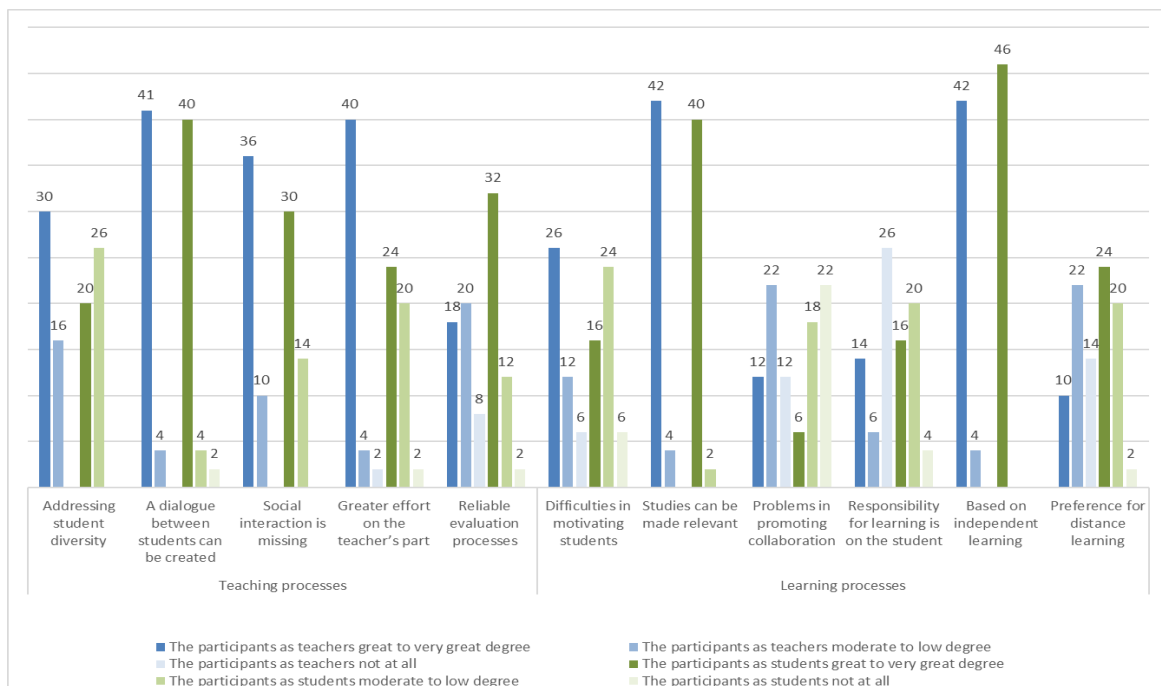
5. Conclusions

The importance of familiarity and experience with assorted digital environments, is that the teacher can choose the appropriate technology for the planned pedagogy, developing the ability to transfer knowledge from one field to another, teamwork, and collaboration, encouraging the creation of shared knowledge bases, which can be used in practice and are appropriate for online learning.

Regarding the SAMR model (Puentedura, 2014), we see that most of the participants answering as teachers have not reached more than the second stage (augmentation). In other words, a significant change, as laid out in the model's third stage (modification), is required. The technology is not only a tool that optimizes the task functionality; it offers an opportunity for change and redesign of tasks and ways of learning. We also recognize the need to develop and promote the skills needed for online teaching and learning such as digital literacy and ICT literacy, acquaintance with and command of digital literacy skills that deal with cognitive and socioemotional processes for activities in a digital environment such as the ability to locate information, evaluate it and use it intelligently.

The gap between the participants' responses as teachers and as students indicates the disparity between their perceptions of their self-efficacy. As students, it is easier for them to work in an online environment. Accordingly, the more positive personal experience they gain with a range of online continuing education courses, the more their belief in their ability will increase, and the chances for developing feelings of self-efficacy and realizing their abilities in different teaching situations in the classroom will be higher, a process that will lead to significantly more academic application.

The fact that the teachers have undergone the process of online learning and even participated in it in the best possible way is still not enough to overcome the concerns about coping in the field. The good modeling that they had in the continuing education courses does not ensure their success in implementing it with their students. It may be that here too the lack of self-efficacy is being expressed.

Accordingly, it is important to find ways to empower social interaction in an online environment using the correct tools. Appropriate physical conditions such as a stable internet connection, readily available technical support, personal mentoring of teachers, and teachers' up-to-date knowledge about teaching in an online environment will enable fostering of collaboration, dialogue and social interaction among students that will nurture students' motivation.

Nonetheless, despite the possible enjoyment felt at times by teachers and students in online courses, many students report the lack of face-to-face encounters. An additional problem in online courses relates to the fact that some students do not feel comfortable in such courses in terms of participating in online discussions and creating relationships with the rest of the community (Stodel et al.,2006). The main conclusion from this is that self-efficacy for online learning must be created. Students must be prepared through preparatory workshops in advance of online learning, to help them adjust to participating in online discussions and online teamwork.

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