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Perceived Educational Continuity of Participants in a Webinar on Distance Learning During the COVID-19 Crisis

ABSTRACT

The international health crisis forced the Belgian government to close educational and training institutions to limit the spread of COVID-19. This decision led the actors of the educational system to redefine their practices. Various initiatives have been taken to ensure educational continuity. Within the framework of an online conference organized by the “MUMONS”, we collected the perceptions of the participants (teachers, parents, students, etc.) by means of the online voting system “Wooclap”. The results of our analyses show that the forced transition to distance learning required these actors to acquire digital skills that they generally lacked. Although they experienced pedagogical, technical and/or organizational difficulties, they state that this health crisis context allowed them to develop socio-affective links, particularly through collaboration and exchanges.

Keywords: COVID-19, educational continuity, distance learning, perceptions, Wooclap

1. Introduction

Since January 2020, the national and international news has been dominated by the spread of the infectious disease called COVID-19. In this extraordinary context, strong measures have been taken by the authorities of the most affected states. As a result, Belgium has been under lockdown since Saturday March 14 to severely limit contact between people, in order to slow the spread of the virus and reduce the risk that the medical services concerned will not be

able to cope with the influx of patients. These measures include the closure of schools and many changes in teaching methods. Indeed, with classes suspended, home-based activities had to be considered (Circular 7541, 2020). Although classroom activities are stopped, educational policies show a willingness to provide education to students in confinement.

If, for compulsory education, teachers have the task of respecting the logic of “remediation-consolidation-overcoming” in learning (Circular 7541, 2020), in higher education, the watchword is to organize distance learning. Thus, the expectations of the school environment are quite diverse, ranging from a simple weekly call, to sending assignments by e-mail, to online courses at scheduled times. However, not all teachers are equal when it comes to the digital tasks offered (UNESCO, 2020). Some have technical, pedagogical, organizational and communication difficulties with the unique practice of distance education. Others, on the other hand, see it as an opportunity to explore and test new teaching practices. These different factors are therefore either the source of frustration or the origin of an acceleration in the use of digital education, which has led various actors to express their feelings via social networks, forums, etc. to share their practices or to seek answers to their needs.

In this context, this article proposes an analysis of the perception of 154 educational actors who participated in a live conference¹ organized and followed by more than 400 people on Thursday, March 26, that is to say 12 days after the beginning of the confinement, by “MUMONS, Sciences, Arts & Curiosities”, structure of the University of Mons in the field of culture and diffusion of sciences and technologies. During this conference, Bruno De Lièvre and Gaëtan Temperman propose to accompany teachers in their reflection on distance learning. This conference is an opportunity to go further than recommending a list of tools: it presents examples of tasks on which they could base their own teaching scenarios and make learners active. The main objective is to highlight, on the one hand, pedagogical principles (Dillenbourg, 2016) for scripting learning (creation and sequencing of tasks, identification of digital tools, etc.); on the other hand, to identify the most appropriate tools to use in the learning process. The main objective is to highlight pedagogical principles (Dillenbourg, 2016) for scripting learning (creation and sequencing of tasks, identification of digital tools, etc.); on the other hand, to describe the monitoring modalities that are essential to effectively manage it (Quintin, 2008).

¹ Link to the conference: <https://youtu.be/TztVsWMT3J4>

2. Theoretical anchors

De Lièvre et al. (2006) as well as Quintin (2008) highlight the positive contribution of tutor interventions to facilitate learners' progress. For them, the idea of intervening during learning corresponds to the approach suggested by Bruner (1998). It aims to accompany learners ("guide on the side") in their steps. It is likely to have a significant impact on their performance during and at the end of the learning process. In terms of content, regulation can concern different complementary aspects. It can deal with pedagogical, organizational and socio-affective (relational) aspects, as well as technical aspects when digital tools are used.

Pedagogical support begins with clarification of the objectives to be achieved in the course. The pedagogical aspects include clarification of the content to be mastered and help in restructuring the material. On the evaluative level, it corresponds to the drafting of formative feedback as learning aids. Pedagogical interventions are used to draw attention to important points and to encourage learners to build their knowledge.

On the organizational level, the interventions concern the progress of the task. They facilitate time management, which is a major difficulty to overcome for distance learners. From this perspective, they also help learners to take a step back from the planning of tasks, the sharing of tasks and the relevant use of the tools provided.

As far as the relational aspects are concerned, the interventions take into account, on the one hand, the socio-affective dimension, such as facilitating the learners' mutual knowledge of each other and highlighting the positive contributions of each; on the other hand, the motivational dynamics, such as encouraging and encouraging the students to participate in the process on a regular basis. Quintin (2008) highlights that tutoring focused on the socio-affective dimension has a positive effect on the process in terms of group cohesion. Quintin's work (2008) also shows that this improved relational climate has a positive influence on the quality of the learning product achieved as a team and, consequently, on the individual progress of learners at the end of the learning process.

Finally, the technical aspects refer to the units of intervention related to the resolution of problems in mastering digital tools (Quintin, 2008).

3. Methodology

3.1 Research objective and data collection

The objective of the research was to establish a state of the art of the perceptions of the educational actors. We asked ourselves the following main question: how do the pedagogical continuity and the implementation of distance learning modalities unfold for the different actors of education? In order to answer this question and to make the conference interactive, the Wooclap tool² was used to collect different data. Five questions were asked to the participants during the conference. First, the profile of the participants was collected: parents, teachers, school leaders, students, or grandparents. As the online format allowed for a wider dissemination of the conference, the option “other” was added. The third question concerned their feelings about educational continuity: it is going rather well; it is viable in this emergency situation; it is very difficult to live; no opinion. Next, the respondents were asked to rate themselves on a Likert scale from 1 (not at all in agreement) to 5 (completely in agreement) to identify, according to their status (parents, teachers, etc.), their level of integration of the constraints of educational continuity. Finally, the last question allowed participants to indicate the aspects of educational continuity that they felt worked well or needed improvement.

3.2. Sample

The sample is composed mainly of participants from French-speaking Belgium. The analysis of the questions is based on a variable number of answers. This variability is linked to the collection instrument used: Wooclap. Each participant did not necessarily answer all the questions. As a result, out of the 400 participants, only 154 answered all the questions asked during the conference (not yet connected at the time of the question, the Wooclap tool not yet in use, technical problem or wish not to participate). Among these 154 respondents, 57 are teachers, 1 is a parent, 13 are learners (students or pupils), 3 are school managers and 13 are listed in the “other” category. It is interesting to note that some participants mentioned that they had multiple roles in this educational

² Wooclap is an interactive televoting tool that facilitates participation and interaction with an audience: participants answer questions in real time and can also ask questions via televoting during the presentation.

continuum. For example, 23 participants said that they were teachers, parents or students. Finally, 44 participants did not answer this question (Figure 1).

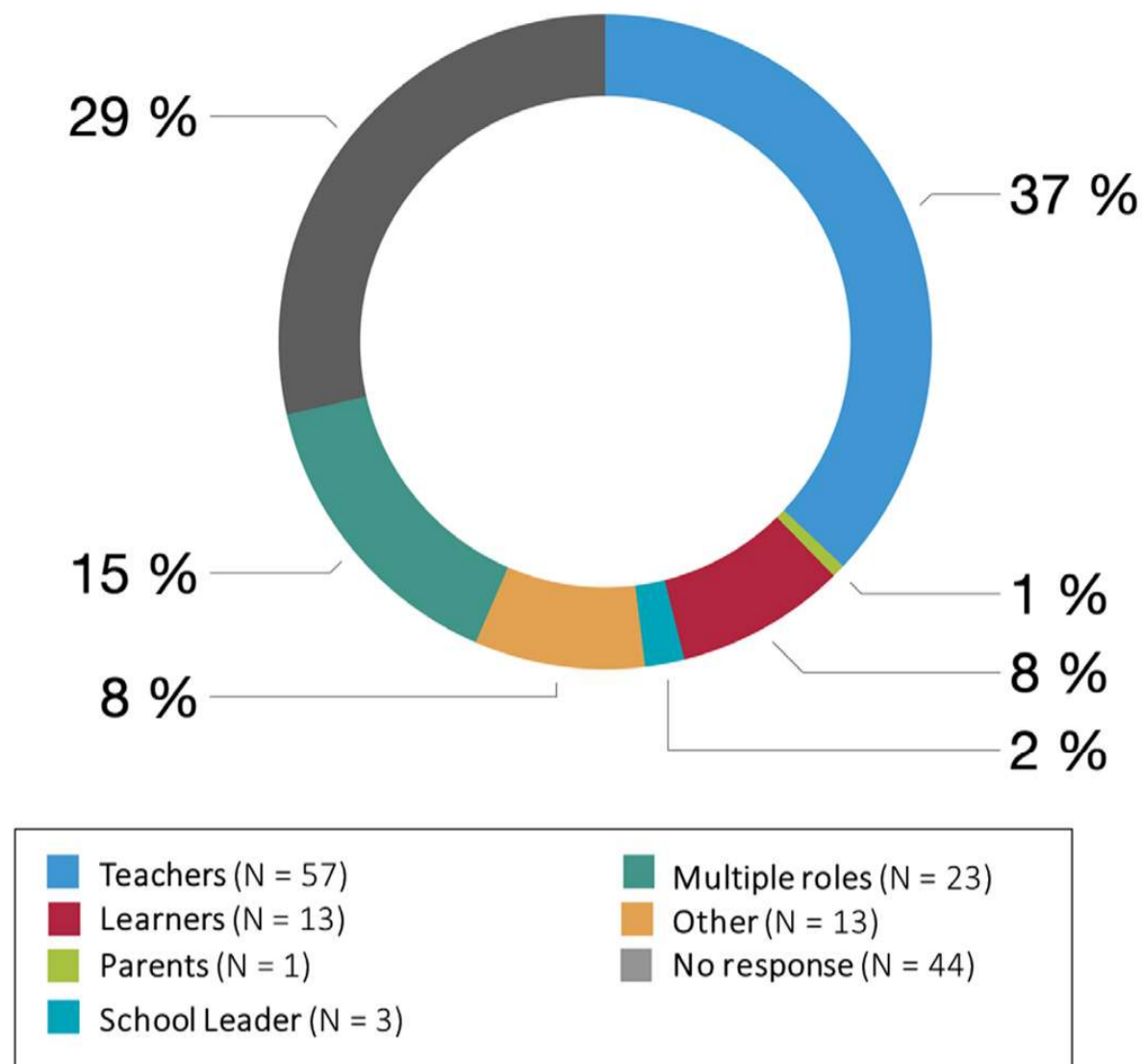


Figure 1. Distribution of subjects according to their educational role.

Source: Descamps et al. (UMONS)

We note that some subjects chose a single role, while others announced that they had taken on several roles during the educational continuum. Nevertheless, caution should be exercised with this data. In fact, one participant could choose only one role, even though he fulfilled several roles (head teacher and parent).

4. Results

When we question the sample, it is clear that educational continuity is not easy for anyone. In Figure 2, we observe that the closer the rate is to 100%, the easier the situation seems to be, the closer the rate is to 0%, the more difficult the situation seems to be. We note that all the averages are below 50% and therefore indicate that this situation seems difficult to live with, especially for teachers (37%) who have the lowest satisfaction rate in our sample.

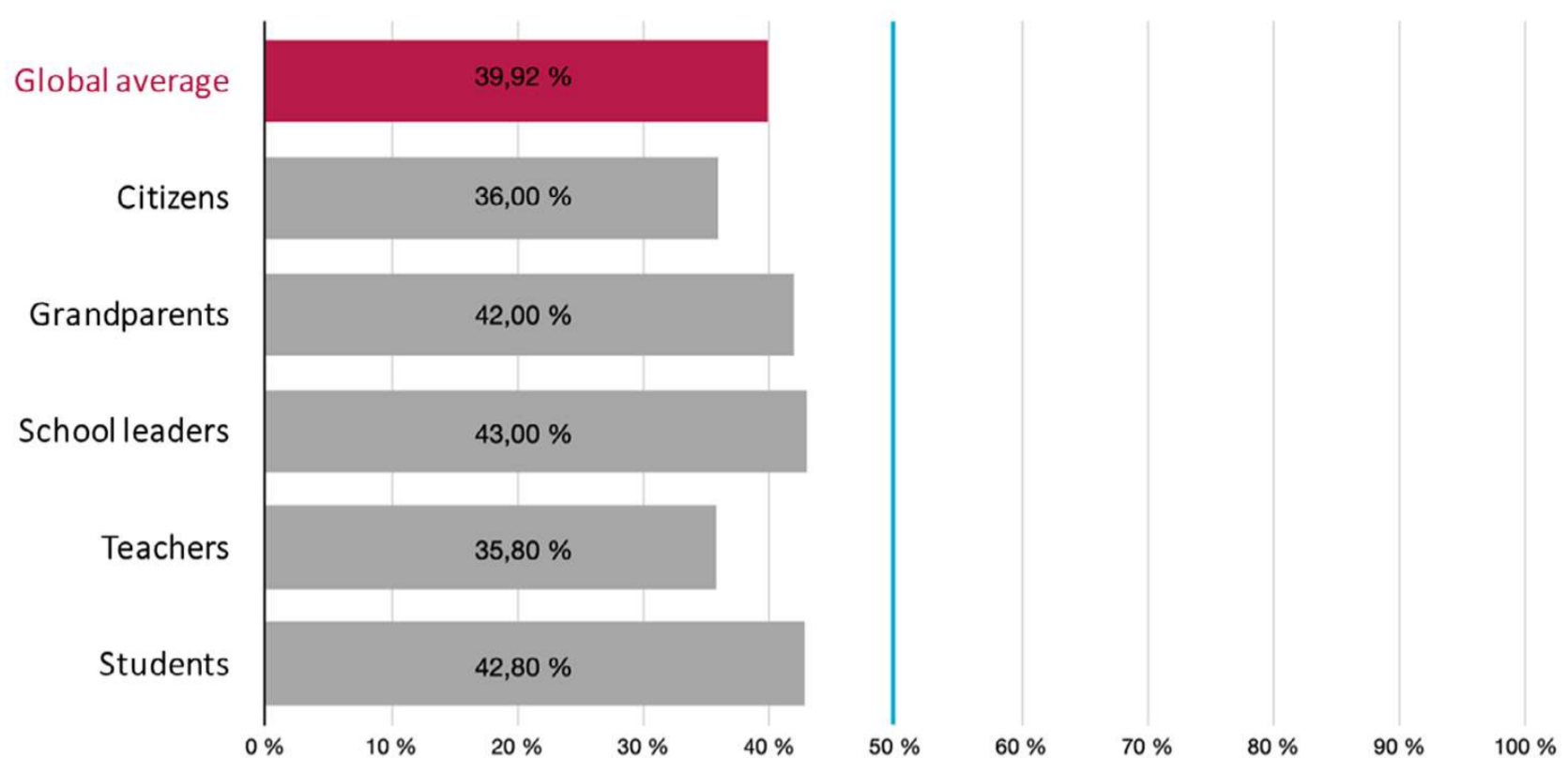


Figure 2. Subjects' perception of accommodation of educational continuity by function.

Source: Descamps et al. (UMONS)

During this conference, we found it interesting to ask participants about their feelings: “Regarding educational continuity, would you say that it...” (Figure 3). While in the previous question, the situation was perceived as quite difficult for the teachers, the majority of them ($N = 57$; 52%) felt that the situation was viable in this emergency situation (31%) or was going quite well (10%). On the contrary, 6.36% of the teachers think that this situation is difficult to live with. Finally, some teachers did not express an opinion (2.73%). These findings corroborate those of Haag (2020, p.3), according to whom the comments testify to a capacity for resilience in unprecedented circumstances.

According to the learners in the sample ($N = 13$; 12%), the situation is quite positive. Among the 12% of the sample represented by learners, 8% feel that the situation is viable, and 1% that it is going well. On the contrary, for 2.73%, it seems difficult to live with. For school officials ($N = 3$; 3%), the situation is viable in an emergency (1.82%). Conversely, for the only parent in the sample ($N = 1$; 1%), this situation was very difficult to live with.

For those who have several statuses ($N = 22$; 23% – teacher and parent, teacher and student, or teacher, student, and parent), the situation seems less positive. Indeed, for 5.46% of them, the situation seems very difficult to live with. We hypothesize that this difficulty stems from the work overload associated with the multiple tasks inherent in their profiles. Thus, when a teacher is at home with his family, they must, in addition to the workload related to their job, manage their children's primary, emotional and academic needs,

but also the tasks related to the management of daily life. On the other hand, 8.19% thought the situation was viable and 3.64% thought it was going fairly well. Finally, the participants who did not fit into any of the above profiles (N = 13; 12%) were more mixed. For 2.73%, the situation was very difficult, 4.55% thought that educational continuity was viable and 1.82% thought it was going well. Finally, Figure 3 shows a fairly positive perception for teachers, learners and school principals; a fairly mixed perception for those presenting several profiles simultaneously, as well as for the “other” profile; and a rather negative perception for parents.

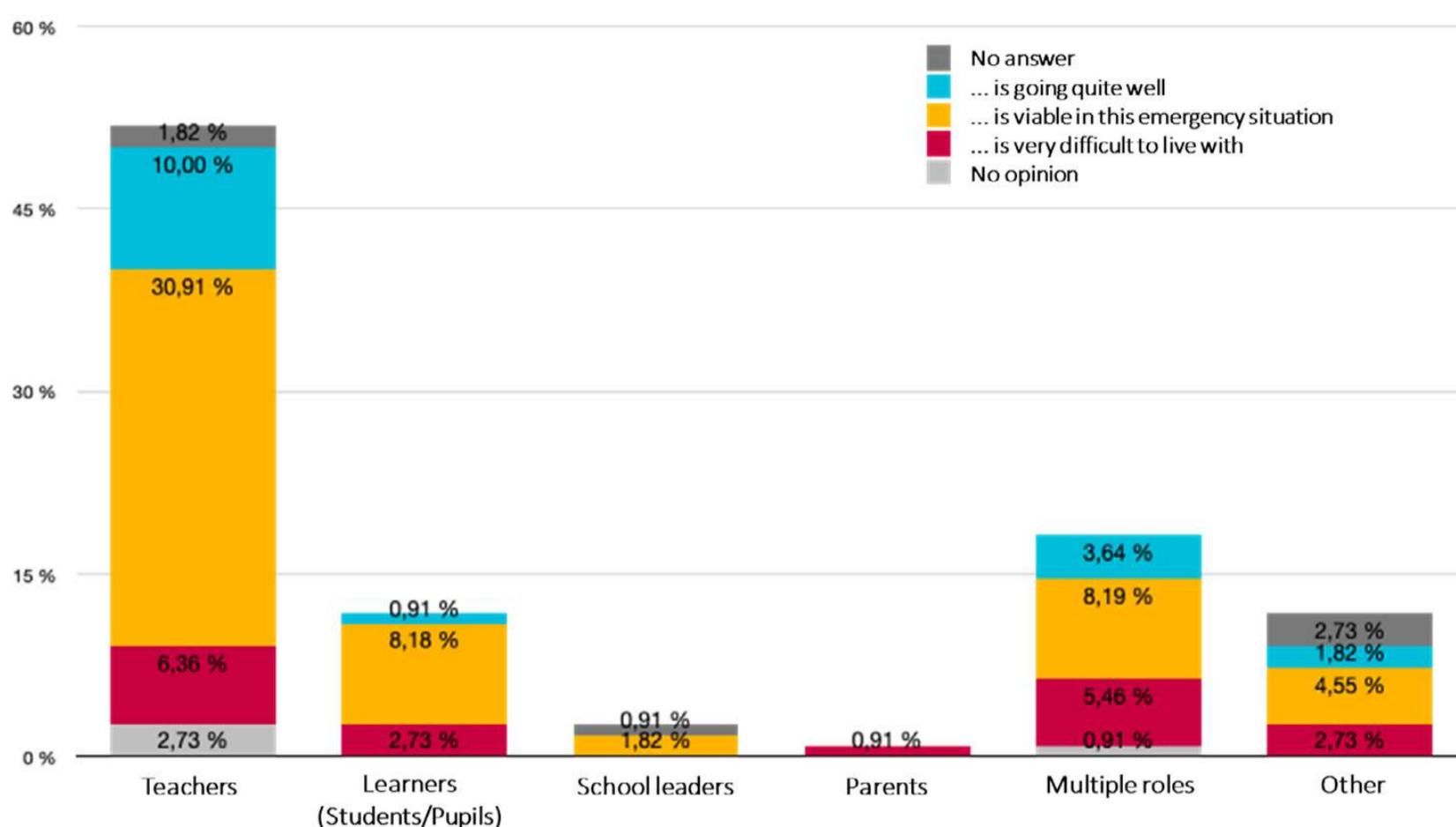


Figure 3. Perception of the course of the educational continuity of the subjects according to their educational role.

Source: Descamps et al. (UMONS)

Teachers and school principals have shown responsiveness and creativity in order to pursue distance learning in a new context that has led them to adopt new tools (Capitanescu et al., 2020). We imagine that this forced and urgent transition to new teaching practices may be difficult for some teachers. Moreover, these new working conditions can create anxiety, a feeling of digital incompetence, questioning and frustration (Goyette, 2020). Nevertheless, as Saint-Fuscien (2017) reminds us, the exceptional nature of certain events such as this health crisis is an opportunity to rethink teaching practices and can be a source of pedagogical innovations. Concerning learners, Haag’s study (2020)

provides some answers about the students' experience of this new distance learning situation. Although they do not want distance learning to become the norm, nearly seven out of ten students highlight positive elements such as increased autonomy, a new form of learning (manual work, digital tools, etc.), a better quality of life (sleep patterns, diet, rest time, etc.). The role of parents is modified, moving from supervision of homework to a more important support, being the one "who translates, rephrases, organizes the instructions and ultimately teaches" (Capitanescu et al., 2020, p. 20), sometimes with anxiety about this new skill that some of them have to take on. This new dynamic in which students and their parents are involved can lead to tensions, as the demand for satisfactory school performance can be more intensely experienced within this parent/child relationship. To this we add the difficulties inherent in family organization between teleworking, managing school tasks and technical constraints, both in terms of time and work space (Capitanescu et al., 2020, p. 20).

During the conference, participants were asked to identify what was working well or what needed to be improved in the pedagogical continuum, 12 days after its beginning (Figure 4). In order to disaggregate their responses, each respondent indicated in an ad hoc column a "+" if their opinion was positive and a "-" if it was a difficulty or a lack. The collected verbatims were then analyzed according to Quintin's (2008) four categories of tutorial interventions: technical, pedagogical, organizational and socio-affective. Examination of Figure 4 shows that the number of negative meaning units (N = 153) is higher than the number of positive meaning units (N = 108). This result is consistent with the perceived difficulty of the current implementation of educational continuity (see Figure 2).

Concerning the technical aspect of pedagogical continuity, many elements should be improved (Negative technical [T-] = 50 [in red]; Positive technical [T+] = 21 [in blue]), according to the respondents. Indeed, the latter point to shortcomings related to the use and integration of digital distance learning. Respondents regret the lack of training in ICT, as well as the lack of tools adapted to their needs. Teachers and students lack digital skills. This need had already been highlighted by Frau-Meigs (2020) who demonstrates the urgency of training in digital and media skills. However, this health crisis has highlighted something already known: the lack of technical skills among teachers (Papi, 2012; Nogry & Sort, 2016; Loisy, 2007). We argue that this crisis compels trainers to strengthen the development of digital skills in pre-service and in-service teacher education.

In the technical management of educational continuity, several participants identified the digital divide as an obstacle. Indeed, they are concerned about being able to give all their pupils or students the same follow-up while some

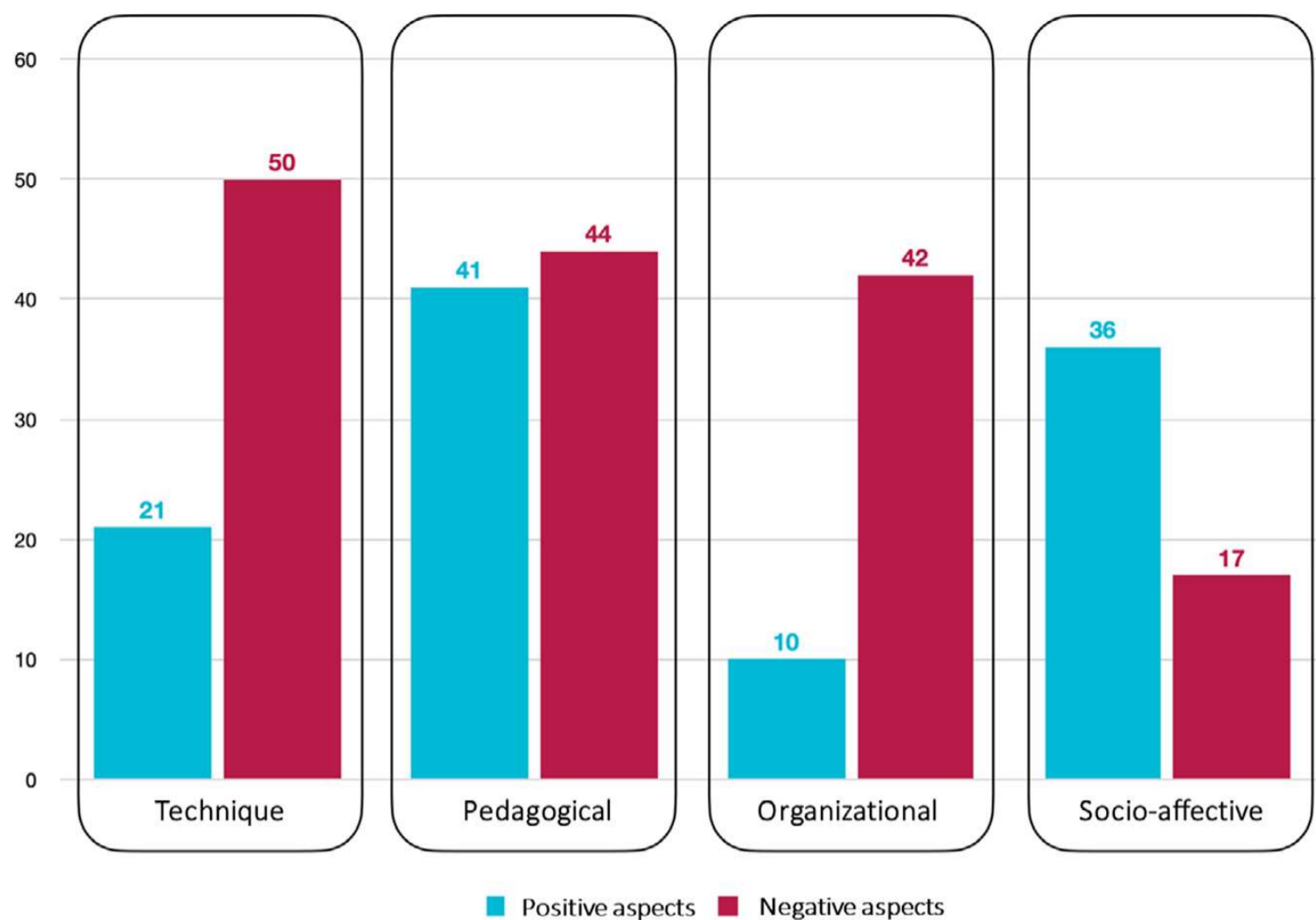


Figure 4. Distribution of verbatims according to Quintin's (2008) four categories of tutorial interventions.

Source: Descamps et al. (UMONS)

families do not have access to computers or the Internet. Since the beginning of the containment, this inequality has been highlighted on numerous occasions (Frau-Meigs, 2020; The Education Foundation, 2020; Barras, 2020). UNESCO (2020, p. 1) has moreover sounded the alarm by indicating that from a global point of view, "half of learners do not have access to a computer at home and 43% do not have Internet at home".

Despite these negative opinions, respondents have discovered the digital potential of easy-to-use tools such as Lives, Messenger and videoconferencing. They appreciate the opportunity to increase their skills by using new tools and creating more elaborate digital content, as well as the ease of access to ICTs to set up this remote support.

The category related to pedagogical aspects is the one where respondents are the most mixed (pedagogical-positive [P+] = 41; pedagogical-negative [P-] = 44). Indeed, the transition from face-to-face courses to entirely distance learning courses had to be done in a hurry and the teacher was not prepared for it (Cerisier, 2020). Our participants cite several difficulties in this adaptation, such as the explanation of certain notions, unclear instructions, the management of assignments, the lack of means to recover the student's attention, and the

management of large groups. However, these different aspects of pedagogical management have long been taken into account in the scripting of distance or hybrid training. Let's take, for example, the management of large groups. Teachers insist on the lack of adapted tools or the difficulty of interaction. However, the spread in the educational landscape of MOOCs, whose M stands for Massive, shows that the large number of learners is above all a component to be taken into account when designing devices, rather than a hindrance to learning (Depover et al., 2017).

Our respondents also identify the absence of feedback as a weakness of this pedagogical continuity, which impacts both teachers (the absence of continuous feedback makes it very difficult to adopt learning tasks) and learners (the absence of feedback tends to demotivate children). This observation is logical as Hattie & Timperley (2007) show that feedback is one of the means to implement scaffolding, and it has a positive effect on the students' feeling of efficiency.

The quality of pedagogical continuity is different depending on the type of course: for theoretical courses, it goes well; for practical courses, it is more complicated. Bobroff et al. (2020) have however identified different alternatives to consider this change: numerical simulations, life-size tests or even the smartphone which has very powerful sensors (for example, measuring the speed of rotation). The authors point out that the students are delighted with this change of routine and the opportunity to work independently. Within the framework of the science course, this remote experimentation allows students to get out of the laboratory and to take hold of everyday life.

This adaptation has required teachers to rethink their teaching from the ground up. For Frau-Meigs (2020), the health crisis made it possible to realize that a routine had set in in-person courses, whereas e-learning makes it possible to teach in a different way, to vary practices and to make the student the actor of his learning. Moreover, students can progress at their own pace and not at the pace imposed on everyone. The results of Haag (2020) go in the same direction. Students also argue that this period allowed them to learn differently, to go at their own pace and to gain autonomy.

In his study, Quintin (2008) identifies organization as one of the four components of the implementation and management of distance learning. When asked about pedagogical continuity, a large number of participants (organizational-negative [O-] = 42; organizational-positive [O+] = 10) point to difficulties in organizing and managing time. The urgent introduction of time-consuming distance learning devices has overburdened teachers. In addition, for those who are parents, it is difficult to organize their own and their children's distance

work. In short, as Frau-Meigs (2020) cites, what could be active pedagogical continuity has turned into involuntary telework. Mostly teachers, our participants point to this planning difficulty. Yet, on the learners' side, Haag's (2020) results show that students appreciate the gain in autonomy made possible by the health crisis, especially in learning to organize themselves.

In the end, what works best in pedagogical continuity is the maintenance of the social link, the contact between students and teachers (positive socio-affective [S+] = 36; negative socio-affective [S-] = 17). Moreover, the pupils are motivated to keep in touch and the teachers to participate in the pedagogical continuity. School is not only a place of learning, and the health crisis has reaffirmed this social role of school (Frau-Meigs, 2020). Indeed, in this time of crisis, the teacher must be both empathetic and vigilant, and show an e-presence (Hadji, 2020). The socio-emotional aspect is the only category that obtains more positive than negative results. Indeed, the respondents emphasized the solidarity among teachers and the sharing of resources made possible by social networks. Solidarity had already been identified as one of the positive aspects of this crisis by the students in Haag's study (2020). The COVID-19 crisis has reawakened collective intelligence approaches in various fields (Santolini, 2020): medicine, economics and also in education. However, due to this anxiety-provoking climate and social distancing, isolation makes it difficult to work at home and self-regulated motivation.

In the following, we link the categories established by Quintin (2008), which were all subdivided into "positive" or "negative" subcategories according to the orientation of the answers given by the participants. To achieve this, we rely on a multiple correspondence analysis. This approach makes it possible to synthesize the links between qualitative variables in the form of a scatter plot. On the graph, proximity between these variables indicates a strong association between the responses. Conversely, significant differences indicate opposition between these categories. While remaining cautious with regard to this correspondence, insofar as our sample is not representative, several instructive results can be highlighted from Figure 5 and the participants' verbatims.

When the participants formulate an opinion in one of the dimensions (pedagogical, technical, socio-affective or organizational), it is clear-cut. It is either positive, as in this verbatim: "support [P+]; access to ICT [T+]", or negative, for example: "It is essential that we be provided with quality and specific tools [T-]; No tools adapted to large groups (> 200) [T-]". It also appears that when an opinion is negative, it is generally negative for all the dimensions. However, a stronger relationship was found between the negative P- and T- opinions. This

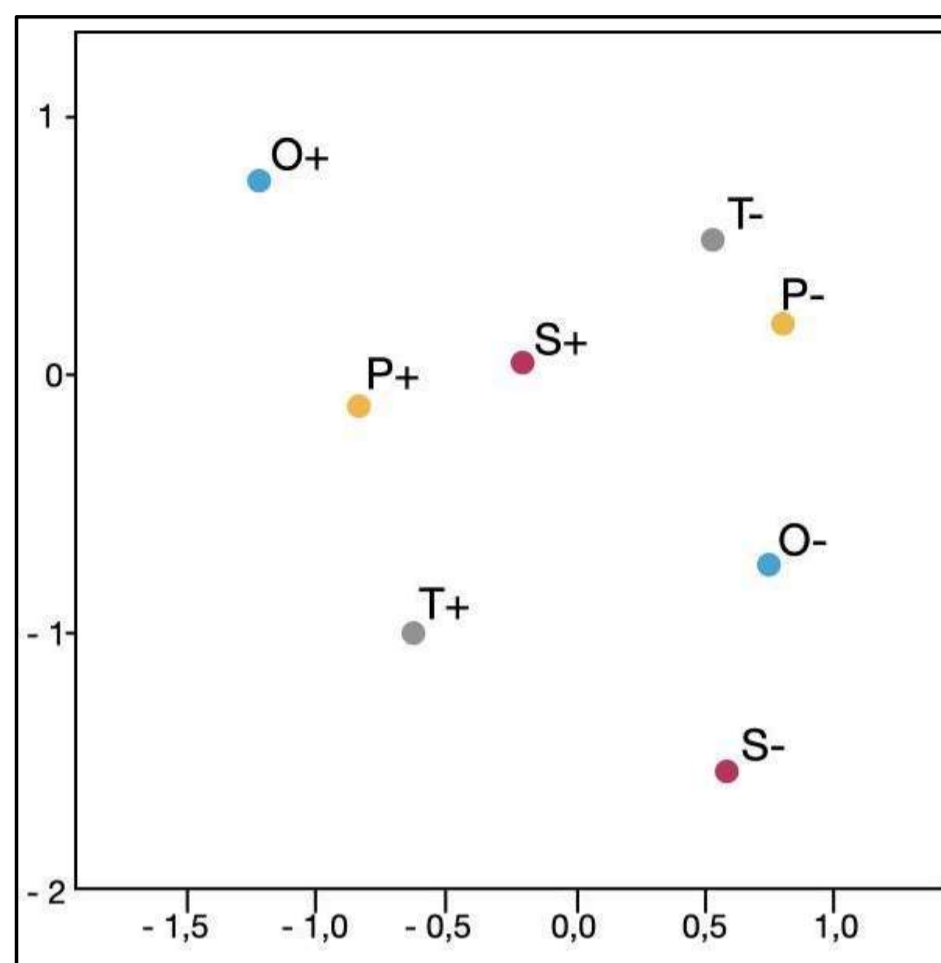


Figure 5. Multiple Correspondence Analysis of tutoring categories.

Source: Descamps et al. (UMONS)

means that when a participant invokes a negative opinion on the pedagogical level, he/she also tends to evoke a negative opinion on the technical level. The following verbatim illustrates this situation well: “more complicated to stay involved [P-]; can be complicated for parents [sic] to accompany children in their learning [P-]; some families do not have access to computer tools [T-]”. This would mean that, in the case of these respondents, 35.80% of whom are teachers, the lack of mastery of the technical aspects would have direct repercussions on the pedagogical level and would make this aspect difficult. We can think that the technical aspects linked to the use of digital technology are a condition for any pedagogical action and this situation is obviously reinforced in the context of an urgent distancing.

Another tendency in the negative opinions is that we notice that an opinion on the social level is often linked to an opinion on the organizational level, as shown by the following verbatim: “overload! [O-]; difficulties with the agenda [O-]; sometimes hard to work at home ...[O-]; telework placement (isolation!) [S-]”. Thus, the fact of experiencing difficulties at the social level (isolation, family management, etc.) would reinforce the difficulty of getting organized and vice versa.

For those participants who cited both negative and positive aspects, the positive aspect that was most often associated was social. Specifically, one

person said that it is “difficult to use the different supports and resources [T-]; the parent is not the teacher [P-]; difficult to set up [O-]; a lot of sharing of resources [S+]; too much stress, you feel overloaded, lost [O-]; it is difficult to work in this context [P-]”. It can therefore be argued that if a person finds himself in a situation that he considers complicated and negative, the most positive aspect that is invoked is the social level. In terms of the recommendations we could make, we would argue that, in the implementation of distance devices, the social dimension is an important factor for learning to take place. This observation corroborates the conclusions of Quintin (2008), according to which socio-affective tutorial interventions have a greater impact on learning in a distance learning context.

Moreover, the positive pedagogical aspects seem to occupy a central place and are linked to the positive aspects of the other three dimensions. Thus, the positive pedagogical aspects are sometimes associated with positive organizational aspects: “The help of the teachers [P+]; the availability of the teachers [O+]”, sometimes with positive technical aspects: “the obligation to test new digital means [T+]; the need to rethink one’s teaching from top to bottom [P+]”. The multiple correspondence analysis nevertheless shows that positive opinions on the pedagogical level (P+) are most often accompanied by positive opinions on the social level (S+): “interest of pupils in using digital tools for learning [P+] / being in direct contact with pupils via the digital medium [S+]” or “the social link [S+]; more differentiated monitoring [P+]; implementation of effective practices in terms of sharing [P+]”. This would mean that for the respondents, the majority of whom were teachers, pedagogy is intimately linked to social issues. They do not envisage the transmission of the subject without interaction with their students. Indeed, school has always had a role that goes far beyond the simple transmission of knowledge (Blanchard & Cayonnette-Remblière, 2016) and also comes under the heading of motivation to engage in learning (Viau, 2005).

To further interpret our data, we attempted to establish relationships between the profile of respondents (Figure 1), the expressed feelings about how educational continuity is experienced (Figure 2 & Figure 3), and the participants’ views on these four dimensions (Figure 4). However, no significant relationships were observed. Neither the function nor the perception of pedagogical continuity seems to modulate the opinion on the importance of supervision during the learning process. This result seems logical given the opportunistic nature of our sample.

5. Conclusion

While remaining cautious insofar as this is a sample motivated by the educational issue, our analysis of the webinar participants' statements brings out several interesting results with regard to the distancing of teaching situations in a pandemic context.

The transition to distance learning requires teachers to master digital skills. It is clear that this is not self-evident and that it may have been an obstacle to teaching practices in the context of the health crisis. This forced transition has, however, allowed teachers to rethink their teaching practices in depth and has led them to share these new practices, to collaborate and to help each other, particularly via social networks.

This sharing of resources, the solidarity born during this period of confinement and, more generally, the socio-affective aspects are central to the participants' testimonies. In fact, according to them, this is the only aspect that has more positive than negative aspects in the educational continuity. Moreover, for some participants, while the situation of confinement proves to be complicated at several levels (pedagogical, technical and/or organizational), the only positive aspects invoked are of this order. These elements highlight that school is not only a place of instruction and learning, but that its social component remains fundamental to ensure pedagogical follow-up (even [or even more so] at a distance).

Furthermore, the organizational aspect seems to be of primary importance in the implementation of distance schooling, both for teachers who devote a significant amount of time and for parents who alternate between teleworking and managing their children's school tasks. Our results also show that the organizational shortcomings are related to the social shortcomings. Teachers are also aware that not all of their students have the same access to computer tools. Their fear is that this digital divide will make educational continuity unequal.

Finally, we ask what digital uses teachers will make in their classrooms once they leave confinement. Will they continue their initiatives to adopt digital tools? Will they still express a need for training in digital skills? Teachers fear the inequalities caused by the digital divide. Will they be amplified when they return to the classroom? Will new inequalities emerge as a result of this confinement? These are all questions that will need to be addressed urgently after this pandemic period.

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