
Changes of assessment in remote learning: educators' perceptions and findings

Anžela Jurāne-Brēmane

Vidzeme University of Applied Sciences,
Cesu Street 4, Valmiera, Latvia
Email: anzela.jurane@va.lv

Abstract: In the spring of 2020, the learning process globally was reorganised using online technologies that support a new strategy 'emergency remote learning'. At present, it is unclear how long emergency remote teaching and learning will need to be in place. As a consequence of recent health safety measures the teaching and learning activities have changed, including student assessment. The aim of this paper is to explore educators' perceptions of the changes in assessment and feedback. A survey of educators in Latvia was conducted, as well as two focus group discussions. The main findings examine such important aspects as the importance of feedback, the possibilities and use of technology, and well-designed assignments. One initial finding of this review is that Latvian educators have reviewed, supplemented and developed assignments to deal with this new situation. In summation, this study aims to strengthen the understanding of learning and assessment when emergency remote teaching and learning is utilised.

Keywords: assessment; assignments; changes; emergency remote learning; feedback; technologies in assessment.

Reference to this paper should be made as follows: Jurāne-Brēmane, A. (2022) 'Changes of assessment in remote learning: educators' perceptions and findings', *Int. J. Learning and Change*, Vol. 14, No. 4, pp.469–484.

Biographical notes: Anžela Jurāne-Brēmane received her PhD in Pedagogy from the University of Latvia in 2018. She is currently a Postdoctoral Research Fellow in the Vidzeme University of Applied Sciences. Her research interests include educational assessment in different levels of education system.

1 Introduction

In the spring of 2020, the online learning process was expanded to incorporate emergency remote learning; however, most of it took place without proper preparation. To help prevent the spread of the virus, many educational institutions have cancelled all face-to-face classes, including laboratories and other learning experiences, by moving the learning process online (Hodges et al., 2020). The familiar and well-structured classroom learning environment, which was well known to educators and learners, was disrupted. The rapid transition did not allow time to create the right virtual learning environments to replace existing structures and relationships. The result of this situation was a chaotic learning environment using available learning management systems, focusing on learner interactions with content rather than student-student and student-faculty interactions

(Settersten et al., 2020). At the beginning of the crisis, many educators around the world tried to switch their teaching practice from in-person to remote teaching within a few days. This situation revealed a significant gap in the training of educators, as they lacked the readiness and ability to effectively implement emergency remote teaching, including teaching with technology to ensure the continuity of learning for students at a distance (Trust and Whalen, 2020). Now is the moment to critically analyse the changes brought about by the transition to emergency remote teaching and learning in order to better understand the potential to promote student learning (Stohr et al., 2020).

The aim of this study was to explore educators' perceptions of changes in assessment and feedback. The research question was: what changes did the evaluators make in their evaluation practice. The answers to this question will help to identify the potential benefits that emergency remote learning could have.

2 The theory on assessment in the remote learning process

2.1 Assessment and feedback

One of the classical theories of assessment, the original version of Bloom's taxonomy of educational objectives, which is associated with the behavioural approach, is well known. However, Bloom's revised taxonomy which emphasises assessment is more applicable currently (Anderson and Krathwohl, 2001). The structure of observed learning outcomes (SOLO) taxonomy is based on a constructivist approach and evaluates the depth of cognitive activity (Biggs and Tang, 2007). It should be noted that the constructivist approach is related to the theory of student-centred learning (Clements and Battista, 1990).

When discussing assessment, two concepts are usually identified: summative assessment and formative assessment. These are the two basic types of assessment described in the literature as assessment of learning and assessment for learning, which are related to the purpose of the assessment (Schuwirth and Vleuten, 2016). One of the definitions shows formative assessment as a process where the assessment of a student's performance is used to guide further learning (Sadler, 1989). By contrast, summative assessment results in an encapsulated assessment which is to be regarded as a judgment (Taras, 2005). It is recognised that the process of assessment permeates the learning process and it is an integral part of the teaching and learning, when information about learning outcomes is identified, collected and interpreted (Farell and Rushbay, 2016). They point out that assessment can be used successfully to support learning, as the learner will improve his/her performance by understanding the learning objectives and processes. Learners develop the ability to reflect at the meta level, they become aware of where they are in relation to learning outcomes and how these can be achieved by bridging the gaps in knowledge, skills or understanding (Daly et al., 2010).

Classroom assessment is identifiable as a formative assessment that focuses on those learning activities offering the feedback information that is needed for changes in the teaching and learning process. For example, such things as the learner's understanding of what is being learned, what is expected and how to make improvements. This is a high-level interaction that takes place between participants in the learning process through various activities – questioning, listening, answering and reflection (Daly et al., 2010). Feedback from the formative assessment practice supports learning and promotes

students' proactive self-efficacy. It promotes learning skills, which are a prerequisite for further study and career preparation (Heritage, 2010). Classroom assessments can be used as a driving force for success in each student's learning life (Stiggins, 2004).

In formative assessment, the role of the teacher is both to use feedback to promote learning and to help students understand the goal, develop the skills to make decisions about their own learning and choose strategies to regulate learning (Heritage, 2010). It is not enough for teachers to interpret passive assessments passively, because assessments must be actively used to influence teaching and learning. If teachers clearly inform students about the different assessment processes and outcomes, students will benefit from self-regulation which drives meaningful learning (Leong, 2015).

A full-fledged and effective assessment process also requires peer assessment. In order to use peer feedback effectively, teachers need clear learning objectives as well as ways to make assessment criteria available. It helps students understand what is needed for their learning (Webb et al., 2018). There is evidence that feedback concerning assessment and the interpretation and application of assessment data can significantly enhance learning.

2.2 Online teaching, learning and assessment

During the twentieth century, with the development of computer technology, online learning became more and more widespread globally. Today, it is a well-established teaching paradigm based on accepted theory and empirical evidence. Diverse technologies are recognised as an indispensable condition of the learning process (Karimova and Zhetpeisova, 2020). Online learning can be entirely done online, as a substitute or as an alternative to face-to-face training, but it can also be introduced as a component of face-to-face learning (Means et al., 2010). A variety of technologies are usually available for virtual lessons: websites with content files, interactive whiteboards for writing or drawing, a sharing space for group work, chatrooms for communication, audio and video chat capabilities. Lessons can also be recorded and watched later or repeatedly. All this requires a stable internet connection (Martin and Parker, 2014). Virtual laboratories provide sufficient opportunities to acquire knowledge, at the same time allowing the acquisition of new technological skills that will be useful in further studies and working life (Kerr et al., 2004).

Two types of learning process operations are widely discussed in the literature: synchronous and asynchronous. Synchronous e-learning takes place in real-time and is provided by video conferencing and chats, which promote a learning community and helps students feel like participants rather than learning in isolation (Hrastinsky, 2008). Synchronous e-learning is not characterised by lectures, demonstration videos and other 'knowledge transfer' activities, as active student participation is essential in the learning process (Hyder et al., 2007). During interactive lessons, students can write questions without interrupting the speaker, these are visible to others, thus promoting critical thinking skills, as it forces others to rethink their knowledge and understanding (Martin and Parker, 2014). It is recognised that online teaching and learning has many pedagogical benefits. It is very important to include synchronous active learning activities in online learning, as well as getting students to participate in such activities (Stohr et al., 2020).

Asynchronous e-learning is linked to learning content repositories and also includes technologies such as e-mails, discussion sites that support learner cooperation and

collaboration with the teacher when not everyone can be online at the same time. This is an essential feature of flexible e-learning, but time management is important for students here (Hrastinsky, 2008). Asynchronous e-learning with the advantages of computer communication provides the opportunity to learn ‘anywhere and anytime’. It is important to follow the constructivist approach here, which pays a lot of attention to peer-to-peer interactions, combining it with self-directed learning (Shahabadi and Uplane, 2014).

Assuring academic integrity is essential in both synchronous and asynchronous learning and assessment processes. Technology allows real-time assessment, including examinations, but the issue of authorship and unauthorised assistance is always important (Brewer, 2004; Butler-Henderson and Crawford, 2020). The development and use of these technologies requires close attention and verification.

However, for many years in many countries, including Latvia, the e-environment was more related to the placement of study materials, and less on the cooperation of participants, leaving this to face-to-face classes (Ulmane-Ozoliņa, 2012). Collaborative learning is defined as a philosophical and methodological approach to the learning process in which people voluntarily engage and want to collaborate with each other to create new knowledge, ideas, attitudes. Technological solutions that provide online video and audio streaming in parallel with written language have become current practice, because computer-assisted interaction can be provided at the same level as it could be in person (Ulmane-Ozoliņa, 2012). Another study looked at teachers-as-learners’ digital skills and readiness to study online, concluding that the learners’ socio-demographic parameters and online learning readiness rate is very important in developing an online course (Mirķe et al., 2019). This is important in the context of educator training and professional development. If the educator has both experience and skills in online learning, then online learning activities for learners will also be more successfully created.

In the context of this study, it is important to talk about technology in the assessment process. As assessment is a part of the learning process, the application of technology in assessment can also change the learning process (Farell and Rushbay, 2016). The transfer of assessment to a computerised environment has been considered since 1960 (Al-Smadi and Gutl, 2008). However, it is important to realise that effective e-assessment needs to consider both technological, data collection and management aspects, as well as the human-centric, social aspects. More attention should be paid to the way the student learns (Daly et al., 2010). Feedback, to be most beneficial for learning, should not be too complicated and should be used effectively. The opportunities offered by advances in learning sciences, measurement of progress, and technology have paved the way for new assessment approaches that will support individualised learning and that can accurately measure and support the acquisition of complex skills (Shute and Rahimi, 2017). A study by Robertson et al. (2019) indicates that the use of digital technologies in formative assessment is useful because it provides immediacy of the feedback, as well as the ability to repeat the task several times until the best result is achieved. Similar results were found in another study comparing online and face-to-face assignment. It concluded that learners in an online environment try to answer the question several times, until the correct answer is achieved, while face-to-face learners leave the question unanswered if they doubt the correctness (Ferguson et al., 2020). Thus, technologies provide an opportunity to implement the most important components of formative assessment.

As a practical justification for e-assessment, it is asserted that it reduces the time and workload for the educator. The pedagogical rationale mentions the possibility of

providing timely and uninterrupted feedback in formative assessment, which is recognised as an integral part of a modern learning system (Al-Smadi and Gutl, 2008). Formative e-assessment is defined as processes in which technologies are used at different levels to obtain evidence of what the student understands as the learning objectives and in which formative activities can be performed. The extent of technology use is not defined, and more importantly there is the omission about how technology resources can be used formatively in collaboration with other social and cognitive resources (Daly et al., 2010). Current formative practices with its emphasis on summative assessment can only be changed if formative assessment and support for new assessment tools and technologies are emphasised. The learning process involves digital technologies such as computers, handheld devices, the internet, whiteboards and so on. As a result, the purpose of formative assessment has not changed, but rather the importance of formative assessment has grown significantly due to new technologies and 21st century learning requirements (Spector et al., 2016). The importance of timely feedback increases, as delays of several days can endanger the effectiveness of feedback in terms of improving learning and performance, but such timely and meaningful feedback is difficult to conceive without the use of technology. Datafication of the learning processes; feedback and scaffolding; peer assessment and peer feedback are identified as key aspects, which need an IT application. Datafication for formative assessment means understanding how to collect data, interpret/analyse and use this meaningful information to support teachers and learners in the learning process. Thus, feedback can come from both people and processed data (Spector et al., 2016).

The potential of online discussion forums in a summative coursework assignment has been outlined highlighting the possibility of evaluating learners' skills linking theory and practice and showing critical and reflective thinking (Gallatly and Carciofo, 2020). However, especially in summative assessment, it is important to ensure the authorship of assignments submitted by learners. Researchers point to the challenges to academic integrity nowadays, related to plagiarism aided by the availability of technology and connectivity, as well as views on cheating (Dyer, 2010).

Unfortunately, not enough methodological support is always available to educators. As the elements of e-learning are usually related to ICT, it is the responsibility of professionals with education and knowledge in computer technology, engineering and programming to provide these functions. Rarely do these teams have a professional with knowledge and experience in pedagogy, which makes it difficult to implement methodologies related to e-learning and use e-learning opportunities to ensure cooperation between students (Ulmane-Ozoliņa, 2012). Thus, full use of technology in assessment requires both technology and pedagogical experts.

2.3 Assessment and emergency remote teaching and learning

To start, it is necessary to describe the changes in the educational process, which are sequentially related to the changes in assessment. A new term, emergency remote teaching/learning, has appeared in the literature since the spring of 2020 (Bozkurt and Sharma, 2020; Eaton, 2020; Hodges et al., 2020; Mohammed et al., 2020; Trust and Whalen, 2020). This approach is characterised by a specific situation where remote learning is not the usual online learning strategy. In addition, the transition has to take place unexpectedly, with no planning, and in a very short time frame. Different educational institutions have different remote learning methods, some already have

online learning systems in place, while others do not, thus creating different understandings of the concept of remote learning and its effectiveness (Shim and Lee, 2020). A timely and well-planned online learning experience is very different from learning offered online in a crisis or emergency. It is estimated that the typical preparation time for a fully online course is six to nine months, with the most efficient products being achieved in the second or third iteration. It is not possible for every educator to become an expert in online teaching and learning, especially in a situation where the transition time is only a week or a few days. Emergency remote teaching is a temporary replacement of a planned instructional delivery model with an alternative delivery mode due to the crisis. In this context, the main goal is not to restore a strong educational ecosystem, but to provide quick and secure temporary access to instructions and teaching materials (Hodges et al., 2020). Other authors emphasise that online remote learning is not only about uploaded educational content, but also about learning as a process that ensures learner participation, responsibility, flexibility and choice. It is a process that involves careful planning and goal setting, resulting in an effective learning ecology. Evidently, online remote learning has always been an alternative and flexible option for learners, but this emergency remote teaching and learning approach is an obligation, so different strategies and priorities need to be considered (Bozkurt and Sharma, 2020; Kiernan, 2020). A timely and well-planned online learning experience is very different from learning offered online in a crisis or emergency (Hodges et al., 2020).

Changes in how curriculum is delivered require for changes in the role of an educator as well. The online educator needs to quickly become part teacher, part coordinator, part guide and part technology expert. Rapid professional development is essential for educators to master technology in combination with learning design components, in order to create an in-depth online learning experience (Settersten et al., 2020). The technological tools for delivering content are the same, but many educators and learners have had no experience, no training, and sometimes no desire to acquire these skills. Sometimes, initially, panic is the basis for a rapid response to ensure the continuity of learning. To mitigate against this response learners and educators are gradually being trained to cope with the new situation. Discussion about how to assess learners in an appropriate and effective way, reveals at least partial agreement amongst involved educators (Eaton, 2020). Educators need tools for effective emergency remote teaching methods, as well as the development of pedagogical creativity to engage learners and stimulate their learning. While this takes place attention should be paid to technical skills, as being able to utilise platforms for a series of learning activities based on the thousands of freely available learning resources is more valuable than just delivering the best lectures (Mohammed et al., 2020).

Since the main focus of this study is on assessment, studies describing the specifics of evaluation in emergency remote teaching were also reviewed. It is important to re-imagine assignments to promote learners' engagement at this time when uncertainty, social insularity and inaction and inertia, can be faced (Kiernan, 2020). It is crucial to ensure that learning outcomes are of high quality and fair, therefore the provision of education must be evidence-based, involving all students, creating a favourable climate and learning environment (Angelico, 2020). Some educators who had never taught online did not have much time to consider the online context and specifics of assessment. It is recognised that the limited ability to supervise students in many cases forces educators to choose to only use multiple-choice questions (Eaton, 2020; Oyedotun, 2020). In the transition to emergency remote teaching, the assessment practice of many educators is the

same as face-to-face learning. The situation became complicated by online exams. It was found that the grades were much higher, especially in the multiple-choice tests. Some educators had not imagined that online tests would enable students to search for answers online (Eaton, 2020).

Emergency remote teaching practitioners are considering a compromise with deadlines. In cases where it was not possible to use the technology in a timely and sufficient amount, it has been impossible to meet the set deadlines and standards. These further increases the stress and negative feelings associated with emergency remote teaching (Oyedotun, 2020). Thus, assessment in emergency remote learning must be carefully considered and justified, leaving room for flexibility in the face of exceptional circumstances.

2.4 Impact on the future

Certainly, research has led to speculation on the impact of emergency remote teaching on educational processes in the future. Sometimes this impact is posited in ‘experimental’ terms. This position allows stakeholders (educators, learners and parents) an insight about the future of edtech itself (Williamson et al., 2020). Until now, there has sometimes been resistance to acknowledging the fact that the rate of knowledge growth and the changing nature of many jobs call for greater educational acquisition or ongoing training. The pandemic has led to significant changes in the use of electronics, the internet and remote learning, which can lead to greater openness to lifelong learning (Settersten et al., 2020). Every educational institution must have access to a strong online platform, as the world is becoming increasingly digital in the wake of this crisis (Chiou, 2020). There has also been successful experience in the use of various internet resources in the teaching process, which could be used in future face-to-face learning, especially for students who clearly benefit from and enjoy them in the future. Unfortunately, not all learners are equally equipped with technology. Various types of digital divide continue to dominate in society, threatening the technological future, therefore, education needs to undergo a major transformation, which has been prompted by this pandemic (Iivari et al., 2020).

The readiness of educators for the digital future is also important in this aspect. Researchers point out that educators, educational institutions and training of educators need to be given the opportunity to act as leaders in the digital transformation of education. Prospective teachers need to develop skills to understand, reflect upon, plan and lead the process in which, through the use of technology, strategies are developed in the event of unexpected disruptions (Iivari et al., 2020). Thus, the issues of educators’ training and professional development can also be seen here. The digital transformation of education progressed rapidly as a result of the pandemic, increasing the competitiveness of higher education institutions globally as well as optimising internal processes (Verina et al., 2021). Certainly, the optimisation of these processes also has benefits at other levels of education.

3 Method

A survey of educators in Latvia at different levels of education was conducted. First, a compact pilot survey was conducted to ask four experts working at different levels of education to evaluate the questions. The survey was created using Google Forms and a

link with an invitation to participate was sent to educational institutions and municipal education authorities (52 recipients in total). 181 responses were received. The survey was completely anonymous and did not collect any information that could identify the person. As a result, all ethical research standards were met in accordance with the general data protection requirements (GDPR). It is important to emphasise that the purpose of the survey was to gain insight into ideas for change, not to statistically examine which changes are being made most often. The survey questions can be divided into three groups: data on respondents (the level of education at which they work, the field of education and the duration of their pedagogical experience); questions about the supposed level at which certain types of changes were made (scales 1–5); and open questions about the type of change, new ideas and challenges.

In addition, two focus group discussions took place, the first with teachers from different schools ($n = 12$), the second – educators from one university ($n = 5$). As the discussions took place as part of a larger study, only some of the questions were related to changes in assessment.

The analysis of the results was based on descriptive statistics and content analysis. Microsoft Excel was used for data analysis. As most (and the essential) part of the questions were open-ended, the answers were coded before the analysis of the results. Thematic data analysis was applied (Braun and Clarke, 2006).

Limitations were also present in this study: it is important to note that the use of terminology is quite problematic, because some educators are not familiar with pedagogical terminology, so misunderstandings are possible. Educators do not always adequately understand the concepts of ‘formative assessment’, ‘summative assessment’ and ‘feedback’, this was already evident in the author’s previous research, as well as in the answers of respondents to this study.

4 Results

Data characterising the survey respondents: most educators represented higher education – 35%, the next largest group was primary school – 25%; pre-school – 19%, secondary school represented 17% of respondents, and vocational education – 4%. Concerning the question about the thematic area of education, the answers were developed according to the study areas defined in Skola (2030). A number of possible options for these areas were considered, but it was concluded that Skola (2030) was more easily adapted to different levels of education. The largest number of respondents represented the field of language learning – 23%, the next most widely represented area was natural sciences – 14%, social and civic – 12%. Respondents also had the opportunity to choose the answer ‘other’ and indicate more precisely; it should be noted that pre-school and primary school educators mostly represent all areas, which were also indicated in the answers. Respondents’ answers about the duration of their pedagogical experience in years were similarly distributed without a pronounced dominance at any stage. There were approximately the same number of respondents who had recently started working as educators (1–5 years) as compared to those who have significant experience (21–25 years). The lowest number of respondents has pedagogical experience over 36 years (9%).

These questions about the respondents did not significantly affect the analysis of the results, as it is not a standard statistical survey and due to the small number of

respondents it does not make sense to pay much attention to the distribution of answers in each of the groups. These data served more as contextual information when perhaps peculiar or confusing answers were found, then these answers were considered in the context of the field of study, level of education or some other information related to the respondents. The distribution of responses by group was considered in only a few cases.

The results of the survey will be analysed in the same sequence as the questions in it. Questions about changes in assessment were introduced by three relatively general queries about remote learning and assessment.

The first question asked was “what learning activities did you provide as part of the learning process? (For example, content learning, individual tasks, group work, etc.)” Educators were expected to indicate all remote learning activities, and some respondents did so. Unfortunately, a significant number of respondents only indicated that they used the examples from the brackets above and no others. In total, 25 different types of activities were identified after coding, some of which were indicated in no more than ten responses. It appears evident that individual work dominated during remote learning as most of the learning took place at home. However, group work was also indicated, so it can be assumed that collaboration was encouraged. The answers to learning the content are most likely to be reading a textbook or some written material. Of course, this is a necessary part of the learning process, but respondents answers tended to only focus on the acquisition of content and individual work.

The next two questions were related to assessment in the specified learning activities: “what feedback did you provide in each of the activities?” and “in which of the activities was the performance evaluated with a mark, points, percentages, or pass/fail?” The aim of these questions was to detect the presence of formative and summative assessment in remote learning. Fifteen types of feedback were identified in the responses, but Table 1 includes only those with more than ten responses.

Table 1 Feedback in learning activities

<i>Type of feedback</i>	<i>Number of answers</i>
Conversation, online discussion in a lesson or consultation	75
Submitted works of learners	67
Individual written feedback	53
Tests with correct answers	35
Comments on the submitted works	19
Summative assessment	18
Oral feedback, recorded audio	17

It should be noted that the responses of 11 respondents (equalling 6%) were classified as ‘other’ because they were not really related to the expected response. They were either too general in describing the feedback (e.g., ‘descriptive’, ‘pedagogical’ and ‘continuous’) or demonstrated a misunderstanding of the question (e.g., “the aim was to raise awareness of the content learned”). Sixty-seven answers about the work submitted by the learners as feedback and 18 answers about summative assessment did not provide full-fledged feedback.

The respondents choice of marks, points or other judgments in the assessment indicates that a summative assessment was used. During the processing of responses, 18

categories were identified, but Table 2 summarises the most common responses for those activities that had a summative assessment.

Table 2 Activities assessed summative

<i>Type of answer</i>	<i>Number of answers</i>
Individual work	68
Tests	39
Exams/final assessments	33
In all activities	32
Presentations/projects	17
Not graded	13

Responses ‘individual work’ and ‘in all activities’ show that summative assessment, however, prevailed, although it is more appropriate for the final assessment and the comparison and ranking of the learners than for the support of learning. It should be noted that the answer ‘not rated’ was more common in pre-school education, although at this level of education there were answers about the level of learning of the learner at the end of the year.

In the next three questions, answers were expected about changes in assessment criteria and assessment methods. The first two questions (“please rate the extent to which you had to make changes to your originally planned evaluation techniques!” and “please rate the extent to which you had to make changes to your originally planned evaluation criteria!”) asked educators to subjectively assess the degree of change. These were more thought-provoking questions. In both questions, the most frequently chosen answer (answer mode) was ‘1 – no change’ (55 and 62 respectively). The next most common answer in the first question of this group of questions was ‘3’, while for the second question the number of responses declined in relation to how much change in evaluation took place. This pattern of responses suggests that there was not too much change, as the percentage of respondents indicating little or no change was 51% and 59%. In contrast to this, 20 categories of changes were identified in the answers to the third question “if you noted that there were changes in questions 9 and/or 10, please indicate exactly what you changed.” However, some of the answers did not refer to assessment methods or criteria, such as an indication of an increase in workload or remote learning as such (n = 14). Some of the answers indicated that nothing had been changed in assessment (although the changes were indicated in the previous questions), as well as the wording of some of the answers had no clear link to the question (n = 12). Most of the responses were related to changes in evaluation criteria – changes in points or their weighting (n = 30). Some of the answers highlighted changes directly in the form of assignment: transition to online, tests in the e-learning environment (n = 24). There were markedly more answers about changes in both content and form (n = 17). Twelve respondents indicated that the assessment focused more on individual approaches and support.

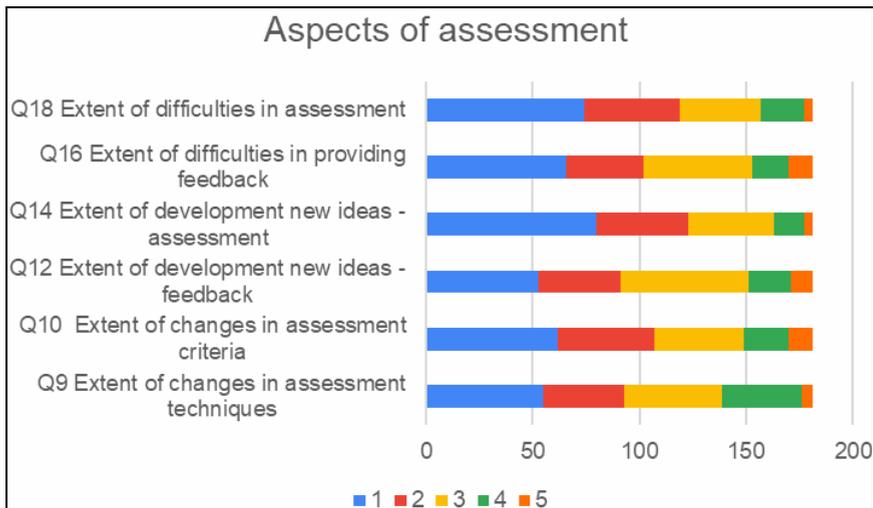
The next two questions were about new ideas and solutions for providing feedback (“please assess the extent to which you have developed new ideas on providing feedback!” and “if you noted in the previous question that there were new ideas, please indicate what these new ideas were”). On the question about the development of new ideas, the answer scale ranged from ‘no new ideas’ (1) to ‘everything was re-created’ (5).

This time the most common answer (mode) was '3' ($n = 60$), which indicated that educators had created more new ideas. In the related open-ended question, 18 categories were identified after coding the answers, and one was subdivided into five subcategories. Also, in this case, answers were identified ($n = 12$) that were not related to the essence of the question, but were related to other aspects of remote learning, such as assessment and feedback in general. Most of the answers pertained to situations where the work submitted by the learner was considered as feedback ($n = 32$), mainly the application of technology in submission and evaluation. However, new ideas ($n = 19$) about the use of technology can also be applied to the feedback provided by the educator to the learner, mainly in the form of WhatsApp text or voice messages, sometimes video. The third largest group ($n = 11$) of answers was related to new ideas in individual communication with learners.

For questions about new ideas related to performance evaluation ("please assess the extent to which you have developed new ideas on performance evaluation!" and "if you noted in the previous question that there were new ideas, please indicate what these new ideas were"), the most frequent answer was '1 - ($n = 80$)', which indicates that there were fewer new ideas in the summative evaluation. This time, 14 categories of responses were identified, however, most responses ($n = 22$) were classified in the 'other' section because they described remote learning and assessment in general. The remaining responses were only 50 in total, with none of the categories identified exceeding 10. The three categories of matching answers with the highest number were 'online opportunities', 'change of assignment type' and 'changes to ensure academic ethics'.

The next two sets of questions were related to difficulties in assessment and providing feedback. In both questions about the degree of difficulty, the majority answer was '1 - no complications, no difficulties' ($n = 66$ related to providing feedback, and $n = 74$ related to summative assessment). The number of response categories was also relatively small - nine for each. The most frequently mentioned difficulties were an increase in the workload and the time required for it ($n = 36$). Various difficulties with technology are also mentioned ($n = 15$), as well as learners' passivity, non-participation in discussions and even conversations ($n = 11$). The educators also indicated that there was a lack of student eye contact, direct observations, therefore, there are doubts about the impact and effectiveness of the feedback ($n = 15$). As some educators considered only the work submitted by the learner as feedback, there are difficulties related to using this method, for example, when the work is not submitted on time or at all, or it is submitted in an inappropriate format ($n = 16$). The most common answers regarding summative assessment were related to doubts about the authorship of the work - whether the learner has prepared the submitted work himself ($n = 35$). The summative assessment also indicated an increase in the workload ($n = 16$). Educators also noted that there were difficulties in preparing and adequately explaining assignments ($n = 11$), as well as with the skills needed in working with technology, and technological support and its quality ($n = 11$).

Figure 1 summarises the frequency of responses to the various aspects of assessment, the extent to which there have been changes, difficulties or new ideas.

Figure 1 Extend of different aspects of assessment (see online version for colours)

It can be concluded that there is a small number of respondents who have made significant changes in their assessment methods during remote learning. As well, at least half of the respondents have made minor changes at the very least in each aspect.

The last question allowed more free expression, and a chance to describe various lessons learned from the transition to remote learning: “please write additional remarks, comments on changes in the provision of feedback and evaluation in the remote learning process.” A total of 85 comments were recorded (47% of the total number of respondents). In the comments, the aspects related to the feedback became more prominent – about its significance, the time required for it, as the increase in individual feedback ($n = 22$). Several educators, in various wordings, said that face-to-face learning was better ($n = 15$). Some of the answers fit into the category related to technology – both skills and equipment ($n = 12$).

The thematic categories were formulated after processing the data from the focus group discussion. From the list of common categories, only those related to changes in assessment, namely ‘authorship of works’ and ‘additional investment in task preparation’, were selected for this study. Regarding authorship, discussions among educators also high-lighted concerns about who really does the assignments. This led to some answers that belong to the second category – the necessity of investing additional work and time in the preparation of appropriate assignments. Of course, educators emphasise that the assignments can be used in the future, saving work and time.

5 Discussion and conclusions

In the transition to remote learning, educators relied mainly on learning the content and then on a series of assignments, largely performed individually, but some-times including work in pairs or in groups. Relatively fewer various interactive methods were used, which Chiou (2020) claims could have promoted greater learner engagement. Feedback by educators was provided in online conversations and discussions, mainly organised in

groups, but sometimes there were individual, online consultations. In addition, some educators tried to provide individual written feedback, in subsequent questions, this was indicated as an increase in workload. The increase in the amount of work and the time spent on it could also be explained by the fact that many educators evaluated all the submitted works using summative assessments. Only a few responses mentioned self-assessment and peer assessment ($n < 10$). Of course, the literature also indicates an increase in the amount of work and time in the transition to remote learning (Iivari et al., 2020; Mishra et al., 2020), so it is useful to carefully consider how activities are planned and assessed.

Unfortunately, some educators consider that feedback is only derived from the works submitted by the learners or from some summative assessments, which. However, it do not represent an understanding of full-fledged feedback (Daly et al., 2010; Heritage, 2010; Stiggins, 2004). Therefore, there is no reason to believe that formative assessment is a common daily practice. As the emphasis is more on the individual learning process in remote learning, the summative assessment was also based on the individual assignments, a large part of which was in the form of a test. For educators, this raised concerns about how answers were obtained and the possibility of unauthorised assistance, concerns which have been raised in previous studies (Butler-Henderson and Crawford, 2020; Eaton, 2020). It is positive that the transition to remote learning has led some educators to evaluate and clarify the assessment criteria and their assigned weight, as well as how to encourage an individual approach and provide support. In the literature, a willingness to do this is related to the educator's assessment competence (Leong, 2015). New ideas and solutions in assessment are mainly related to the use of technology, because in remote learning it is no longer just an opportunity, it is a necessity. These issues can also affect the content and format of the assignments, including efforts to gain confidence in the authorship of the work. There are many difficulties and complications associated with the use of technology, as not all educators have sufficient skills, abilities and experience in teaching and learning online. This finding is in line with previous studies (Mirke et al., 2019). Other difficulties include the creation of adequate assignments and the passivity of learners, both of which hinder a full-fledged learning process. The difficulties of learners have focusing on learning and actively participating were also mentioned in the Shim and Lee (2020) study.

The results obtained are consistent with the results of other studies in most cases. Overall, this study can strengthen our understanding of learning and assessment in emergency remote teaching and learning.

Since the study's question concerned what changes the Latvian educators made in their assessment practice during the COVID-19 crisis the researchers were able to conclude that there were the following significant changes:

- greater importance is now given to feedback in both groups and individuals
- new technological possibilities have been mastered and applied.
- adequate assignments have been created with specified criteria, but clear explanations must be given to learners
- new assignments have been created, which allow educators to gain confidence in the authorship of the submitted work.

The responses to the survey signal the need to significantly emphasise the understanding of feedback in the training and professional development of educators. Teachers do not always have a full understanding of feedback. Some teachers consider the grades assigned to the work submitted by students after learning the content as the only required feedback. As a result, their students do not receive any feedback about their work after that. An educator must acquire the skills needed to reflect on his/her pedagogical practice and experience, so they can draw conclusions that may be discussed with colleagues.

This study's educational contribution has been to provide insight into Latvian educators' perceptions of changes in assessment during the transition to remote teaching and learning. The participants of the study also have benefited from the opportunity to reflect on their evaluation experience in a situation of sudden changes. Of course, it was typical to try to transfer the current assessment approach to remote learning, which then led to an increase in work and time spend. As the transition was sudden and unexpected, no one was prepared, so educators had to work with a trial-and-error approach. The experience of 'learning by doing' has benefited them.

Further research concerning changes, in particular, new, innovative approaches and methods, needs to be undertaken. This is necessary in order to be fully aware of the possibilities of technology-based assessment.

Acknowledgements

This research has been supported by a grant from the European Regional Development Fund Project 'Models of assessment in the digital learning environment (MADLE)' No. 1.1.1.2/VIAA/3/19/561 within the activity 1.1.1.2 'Post-doctoral research aid'.

References

- Al-Smadi, M. and Gutl, C. (2008) 'Past, present and future of e-assessment: towards a flexible e-assessment system', in *Conference ICL2008*, 24–26 September.
- Anderson, L.W. and Krathwohl, D.R. (2001) *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, Allyn & Bacon, Boston.
- Angelico, T. (2020) 'Educational inequality and the pandemic in Australia: time to shift the educational paradigm', *ISEA*, Vol. 48, No. 1, pp.46–53.
- Biggs, J. and Tang, C. (2007) *Teaching for Quality Learning at University: What the Student Does*, Open University Press, New York.
- Bozkurt, A. and Sharma, R.C. (2020) 'Emergency remote teaching in a time of global crisis due to coronavirus pandemic', *Asian Journal of Distance Education*, Vol. 15, No. 1, pp.1–6.
- Braun, V. and Clarke, V. (2006) 'Using thematic analysis in psychology', *Qualitative Research in Psychology*, Vol. 3, No. 2, pp.77–101.
- Brewer, C.A. (2004) 'Near real-time assessment of student learning and understanding in biology courses', *BioScience*, Vol. 54, No. 11, pp.1034–1039.
- Butler-Henderson, K. and Crawford, J. (2020) 'A systematic review of online examinations: a pedagogical innovation for scalable authentication and integrity', *Computers & Education*, Vol. 159, No. 1, pp.104–124.
- Chiou, P.Z. (2020) 'Learning cytology in times of pandemic: an educational institutional experience with remote teaching', *Journal of the American Society of Cytopathology*, Vol. 9, No. 6, pp.579–585.

- Clements, D.H. and Battista, M.T. (1990) 'Constructivist learning and teaching', *Arithmetic Teacher*, Vol. 38, No. 1, pp.34–35.
- Daly, C., Pachler, N., Mor, Y. and Mellar, H. (2010) 'Exploring formative e-assessment: using case stories and design patterns', *Assessment & Evaluation in Higher Education*, Vol. 35, No. 5, pp.619–636.
- Dyer, K.A. (2010) 'Challenges of maintaining academic integrity in an age of collaboration, sharing and social networking', in *TCC 2010 Proceedings*.
- Eaton, S.E. (2020) 'Academic integrity during COVID-19: reflections from the University of Calgary', *ISEA*, Vol. 48, No. 1, pp.80–85.
- Farell, T. and Rushbay, N. (2016) 'Assessment and learning technologies: an overview', *British Journal of Educational Technology*, Vol. 47, No. 1, pp.106–120.
- Ferguson, S., Liu, Y. and Enderson, M. (2020) 'Student understanding of system of equations and inequalities: a comparison between online and face-to-face learning', *The Journal of Educators Online*, Vol. 17, No. 2, pp.1–10.
- Gallatly, R. and Carciofo, R. (2020) 'Using an online discussion forum in a summative coursework assignment', *The Journal of Educators Online*, Vol. 17, No. 2, pp.1–12.
- Heritage, M. (2010) *Formative Assessment and Next-Generation Assessment Systems: Are we Losing an Opportunity?*, Council of Chief State School Officers, Washington.
- Hodges, C., Moore, S., Lockee, B., Trust, T. and Bond, A. (2020) *The Difference between Emergency Remote Teaching and Online Learning* [online] <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning#fn17> (accessed 2 June 2021).
- Hrastinski, S. (2008) 'Asynchronous and synchronous e-learning methods discovered that each supports different purposes', *Educause Quarterly*, Vol. 31, No. 4, pp.51–55.
- Hyder, K., Kwinn, A., Miazga, R. and Murray, M. (2007) *The E-Learning Guild's Handbook on Synchronous E-Learning*, The E-Learning Guild, Santa Rosa.
- Iivari, N., Sharma, S. and Ventä-Olkkonen, L. (2020) 'Digital transformation of everyday life – how COVID-19 pandemic transformed the basic education of the young generation and why information management research should care?', *International Journal of Information Management*, Vol. 55, No. 1, pp.1–6.
- Karimova, B.S. and Zhetpeisova, N.O. (2020) 'On innovative pedagogical technologies and training methods', *International Journal of Learning and Change*, Vol. 12, No. 1, pp.15–24.
- Kerr, M.S., Rynearson, K. and Kerr, M.C. (2004) 'Innovative educational practice: using virtual labs in the secondary classroom', *The Journal of Educators Online*, Vol. 1, No. 1, pp.1–9.
- Kiernan, J.E. (2020) 'Pedagogical commentary: teaching through a pandemic', *Social Sciences & Humanities Open*, Vol. 2, No. 1, pp.1–5.
- Leong, W.S. (2015) 'Teachers' assessment literacies and practices: developing a professional competency and learning framework', *Advances in Scholarship of Teaching and Learning*, Vol. 2, No. 2, pp.1–20.
- Martin, F. and Parker, M.A. (2014) 'Use of synchronous virtual classrooms: why, who, and how?', *MERLOT Journal of Online Learning and Teaching*, Vol. 10, No. 2, pp.192–210.
- Means, B., Toyama, Y., Murphy, R., Bakia, M. and Jones, K. (2010) *Evaluation of Evidence-Based Practices in Online Learning: A Meta-Analysis and Review of Online Learning Studies*, US Department of Education.
- Mirke, E., Cakula, S. and Tzivan, L. (2019) 'Measuring teachers-as-learners' digital skills and readiness to study online for successful e-learning experience', *Journal of Teacher Education for Sustainability*, Vol. 21, No. 2, pp.5–16.
- Mishra, L., Gupta, T. and Shree, A. (2020) 'Online teaching-learning in higher education during lockdown period of COVID-19 pandemic', *International Journal of Educational Research Open*, Vol. 1, No. 1, pp.1–24.

- Mohammed, A.O., Khidhir, B.A., Nazeer, A. and Vijayan, V.J. (2020) 'Emergency remote teaching during coronavirus pandemic: the current trend and future directive at Middle East College Oman', *Innovative Infrastructure Solutions*, Vol. 5, No. 72, pp.71–82.
- Oyedotun, T.D. (2020) 'Sudden change of pedagogy in education driven by COVID-19: perspectives and evaluation from a developing country', *Research in Globalization*, Vol. 2, No. 1, pp.1–20.
- Robertson, S.N., Humphrey, S.M. and Steele, J.P. (2019) 'Using technology tools for formative assessments', *The Journal of Educators Online*, Vol. 16, No. 2, pp.1–10.
- Sadler, D.R. (1989) 'Formative assessment and the design of instructional systems', *Instructional Science*, Vol. 18, No. 1, pp.119–144.
- Schuwirth, L.W. and Vleuten, C.P.M. (2016) 'General overview of the theories used in assessment: AMEE Guide No. 57', *Medical Teacher*, Vol. 33, No. 10, pp.783–797.
- Settersten, R.A. et al. (2020) 'Understanding the effects of COVID-19 through a life course lens', *Advances in Life Course Research*, Vol. 45, No. 1, pp.1–11.
- Shahabadi, M.M. and Uplane, M. (2014) 'Synchronous and asynchronous e-learning styles and academic performance of e-learners', *Procedia – Social and Behavioural Sciences*, Vol. 176, pp.129–138.
- Shim, T.E. and Lee, S.Y. (2020) 'College students' experience of emergency remote teaching due to COVID-19', *Children and Youth Services Review*, Vol. 119, No. 1, pp.1–7.
- Shute, V.J. and Rahimi, S. (2017) 'Review of computer-based assessment for learning in elementary and secondary education', *Journal of Computer Assisted Learning*, Vol. 33, No. 1, pp.1–17.
- Skola (2030) *Mācību Jomas* [online] <https://www.skola2030.lv/lv/macibu-saturs/macibu-jomas> (accessed 2 June 2021).
- Spector, J.M. et al. (2016) 'Technology enhanced formative assessment for 21st century learning', *Educational Technology & Society*, Vol. 19, No. 3, pp.58–71.
- Stiggins, R. (2004) 'New assessment beliefs for a new school mission', *Phi Delta Kappan*, Vol. 86, No. 1, pp.22–27.
- Stohr, C., Demaziere, C. and Adawi, T. (2020) 'The polarizing effect of the online flipped classroom', *Computers & Education*, Vol. 147, No. 1, pp.1–12.
- Taras, M. (2005) 'Assessment – summative and formative – some theoretical reflections', *British Journal of Educational Studies*, Vol. 53, No. 4, pp.466–478.
- Trust, T. and Whalen, J. (2020) 'Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic', *Journal of Technology and Teacher Education*, Vol. 28, No. 2, pp.189–199.
- Ulmane-Ozoliņa, L. (2012) 'Datoratbalstītās mācīšanās sadarbojoties iespējas kombinētajās studijās', *Sabiedrība, Integrācija, Izglītība*, pp.415–424.
- Verina, N., Titko, J. and Shina, I. (2021) 'Digital transformation outcomes in higher education: pilot study in Latvia', *International Journal of Learning and Changes*, Vol. 13, Nos. 4/5, pp.459–472.
- Webb, M.E. et al. (2018) 'Challenges for IT-enabled formative assessment of complex 21st century skills', *Technology, Knowledge and Learning*, Vol. 23, No. 1, pp.441–456.
- Williamson, B., Eynon, R. and Potter, J. (2020) 'Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency', *Learning, Media and Technology*, Vol. 45, No. 2, pp.107–114.