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Flexible learning dimensions in higher education: aligning students' and educators' perspectives for more inclusive practices

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Driven by the rise of recent technologies and long-standing interest in accommodating diverse student needs, the demand for flexibility in higher education has intensified. Moreover, the COVID-19 pandemic has intensified studies investigating online learning effects, reflecting shifting preferences and demands in education. Although prior research recognizes diverse flexibility practices, a narrow focus on instructional delivery limits its potential. Bridging this gap requires re-envisioning flexible learning by involving students, educators, and institutions in the transformation process. Therefore, this study aims to investigate and compare students' and educators' perspectives and experiences of five dimensions of flexibility (deadlines, modality, assessment type, grading and weighting, and course correspondence). The study involves a quantitative and qualitative survey, composed of Likert scale and open-ended questions. The survey respondents were students ($N = 315$) and educators ($N = 100$) at Western University across different years and programs. The quantitative component reveals a general alignment between student and educator preferences across flexibility dimensions. Noteworthy preferences include collaborative deadline setting, non-timed and take-home assessments, and more frequent, lower-weighted tasks. Students' increased preference for hybrid learning, despite a general preference for in-person formats, underscores the value placed on flexibility and adaptability. Qualitative findings illuminate the broader implications of flexibility that can be organized into the following four themes: (1) flexibility humanizes teaching and learning, (2) flexibility recognizes diverse student populations, (3) flexibility provides broad accommodation and increases accessibility, and (4) flexibility can offer immediate relief but poses long-term consequences. In conclusion, this study emphasizes the multifaceted nature of flexibility in higher education, offering a nuanced understanding of the impact of flexibility on students, educators, and institutions, encouraging further exploration and evidence-based policy decisions. Beyond academia, the research suggests potential reshaping of the higher education landscape, positioning flexibility as a fundamental element to foster a more inclusive, supportive, and effective learning environment for both students and educators.

KEYWORDS

flexibility, higher education, perspectives, students, educators

1 Introduction

There has been a longstanding interest in incorporating flexibility into higher education, driven by a range of political, social, philosophical, and economic factors (Collis and Moonen, 2011). In recent years, the rise of innovative technologies and the marketization of education, which views students as consumers, has further emphasized the need for flexibility (Barnett, 2014). Educational institutions worldwide are now expected to offer increased flexibility to meet the demands of a digital society and provide students with opportunities for personalized learning (Barnett, 2014). By implementing flexibility, institutions can effectively address differences in students' needs, preferences, and skills (Soffer et al., 2019).

Since its conception, the term flexible learning has been closely associated with distance learning (Li and Wong, 2018). More recently, flexible learning has evolved to encompass concepts such as eLearning, digital education, online learning, and blended learning, commonly investigated in educational discourse (Fawns, 2019). Moreover, with the recent shift to online-learning during the COVID-19 pandemic, there has been an increasing number of studies investigating the effects and perceptions of online learning (Amir et al., 2020; Lockee and Clark-Stallkamp, 2022; Meng et al., 2024). More recently, there has been a surge in research related to hybrid learning instruction—use of technology to replace in class time (Linder, 2017)—as this modality is expected to increase in use post-pandemic (Guppy et al., 2022). Although flexibility has been and continues to be used to describe delivery mode, it is important to acknowledge that this concept encompasses a broader scope (Beer et al., 2023).

To gain a comprehensive understanding of the role flexible learning plays in higher education, we need to investigate flexibility through a broader lens. Traditionally, the key elements of flexibility have been identified as mode, pace, and place (Roberts, 2002). Mode refers to the method of instructional delivery, pace relates to accelerated or part-time learning, and place pertains to the location of learning (Gordon, 2014). Advancements in technology have prompted institutions to invest in initiatives that focus on the temporal and spatial aspects of flexibility through various delivery approaches, which can also impact the pace and place of learning (Pincus et al., 2017). Although previous research has established the need to employ various flexibility practices to accommodate students' unique needs, abilities, and preferences, the prevailing literature's narrow focus on how education is delivered has limited the scope of flexibility (Normand and Littlejohn, 2006; Smith et al., 2006). Li and Wong (2018) highlighted that individuals examining flexible learning often focus on specific dimensions rather than considering a variety of dimensions from a holistic perspective. Thus, expanding the research on flexibility practices and exploring its various dimensions is crucial to address the needs of diverse learners. As Naidu (2017) highlighted, flexibility should be applied to a range of components, including learning activities, assessments, communication methods, and educational resources. Applying flexibility beyond the mode of instruction can enhance a student's learning by contributing to a more personalized learning experience (Palmer, 2011). Unfortunately, there is a lack of research on the breadth of flexibility in higher education, which restricts our ability to fully harness its potential in addressing student's evolving needs.

To address this gap, it is necessary to re-envision the way we approach flexible learning in higher education, as advocated by

Butcher and Rose-Adams (2015). For this change to be effective, we must involve students, educators, and institutions (Gordon, 2014). Historically, flexibility in higher education has been heavily influenced by institutions and their monetary interests (Pincus et al., 2017). Moreover, there is a growing recognition of the need to examine the student perspective and experience about aspects of flexibility (Doppelt, 2003; Wanner and Palmer, 2015). For example, a study conducted by Li (2014) on distance learners' preferences for flexibility in higher education argues that because students' choices can be variable, the diversity of their preferences and approaches to learning should be taken into consideration when designing study programs. However, there is still a lack of knowledge on the critical experiences of educators despite studies indicating that their involvement is needed in these critical conversations to improve student outcomes (Niemi, 2021).

Considering these factors, our study aimed to expand the research on flexibility beyond what has historically been explored. Specifically, we investigated students' and educators' preferences across five dimensions of flexibility: deadlines, modality, assessment type, grading and weighting, and course correspondence. Additionally, this study evaluated students' and educators' experiences and perspectives of flexibility. Prompted by the pandemic, there has been an increasing demand to increase flexibility in higher education. Therefore, it is imperative to gather evidence to support its effective implementation. The findings of this study will provide valuable insights that can inform future flexible practices and policies in higher education.

2 Materials and methods

2.1 Study design

This study was conducted at Western University, a large research-intensive institution in Canada with more than 30,000 students and 1,350 faculty members. The methodological approach of this study included quantitative and qualitative components to collect data from students and educators to investigate flexibility in higher education. The surveys designed for this research study were based on Roberts's (2002) model, which includes three dimensions of flexibility—place, time, and pace. "Place" questions if students can perform learning from any location, "time" asks if students can perform learning during any time, and "pace" considers what deadlines are associated with learning-related activities. The model was applied as a guiding theoretical framework for assessing flexibility; however, it was adapted and expanded for our study purposes. The following five dimensions of flexibility were identified and quantitatively investigated: deadlines, type of assessment (e.g., timed, take-home, etc.), grading and weighting, mode of learning, and course correspondence. Additionally, open-ended questions allowed participants to share details about their experiences and perspectives regarding flexibility. These qualitative findings provided insights into the 'why' behind the quantitative results, enabling a more comprehensive and nuanced understanding of the data (Allen, 2017; Roudier et al., 2021). This study was approved by Western's Non-Medical Research Ethics Board (Project #: 121778).

Due to the study's nature and the one-time use of the survey for very specific and narrow purposes, formal reliability and validity testing was not conducted. Despite this limitation, the survey was carefully developed based on an extensive literature review and the

survey underwent pilot testing to gather feedback from a small number of participants from the target population. Additionally, detailed records of all aspects of the research process were documented.

2.2 Participants

Students enrolled in any program (undergraduate and graduate) and educators working at Western University were eligible to participate. Participants were invited to complete an online Qualtrics survey that was distributed through social media and the institution's mass emailer list. A convenience sampling strategy was implemented; however, recruitment methods were deliberate and broad to ensure a representative sample across programs and academic levels. To minimize risks and ensure participants experienced no harm or discomfort, a detailed letter of information that outlined the purpose of the study, withdrawal rights, and confidentiality procedures was included in the recruitment materials. The letter of information also included the consent form to participate in the survey. All survey responses were anonymous and did not contain identifiable information. Data were collected from 415 participants (315 students and 100 educators).

2.3 Data collection

Data were collected over three months (January to March 2023). The student and educator online surveys were designed with similar intentions and goals to allow the researchers to draw comparisons between the data sets. The survey included 25 questions that were assessed on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). Participants responded to statements about their preferences across the five dimensions of flexibility. These statements are included in the tables. The following open-ended questions were also asked to reveal students' and educators' experiences and views on flexibility in higher education. 1. 'Based on your experiences with flexibility, what is something you wish your institution and [students] or [educators] knew about flexibility?' 2. 'If your institution offered flexibility, what was this experience like for you?' and 3. 'What is something you would like to change about flexibility policies?' Demographic data such as program/faculty, race, gender, etc. were also collected from participants.

2.4 Data analysis

To analyze the quantitative data, we began by testing to see if the data were normally distributed using the Shapiro–Wilk Normality test. We determined that our data were not normally distributed ($p < 0.001$). Based on this, we used the Wilcoxon test, a non-parametric test that is used to compare two paired groups when the data do not follow a normal distribution. The results of this test determined that there may not be a statistically significant difference between educators and students in this context. Despite no reported statistical significance, the purpose of this study was to investigate patterns and themes related to students' and educators' perspectives and experiences of flexibility, which can be achieved without the reliance on significance tests. Therefore, we analyzed our quantitative data

using Qualtrics to represent such patterns. Likert scale items were coded from 1 (Strongly Disagree) to 5 (Strongly Agree) and the mean and standard deviation were calculated.

Braun and Clarke's (2006) approach to thematic analysis was used to analyze the qualitative data. We began by reading the responses to familiarize ourselves with the data and took initial notes on the themes. Open-ended responses were then uploaded into NVivo 10 for thematic analysis, which involved the generation of initial codes—meaningful and concise labels that correspond to specific data pieces in the transcripts. Codes can be classified as semantic (specifically said by participants) or latent (interpretation of participants' statements) and both are represented in the results. After analyzing all responses and creating a list of codes, we further organized them into larger categories to identify more meaningful themes. Therefore, this process involved searching, reviewing, defining, and naming the overarching themes in the data sets. Once themes were defined and finalized by all authors, participant quotes were identified and extracted for inclusion in the results.

3 Study findings

3.1 Demographic data

Data were collected from undergraduate and graduate students at Western University; 315 students responded to the quantitative questions and 215 students responded to the qualitative questions. Participants were undergraduate (81%), female-identifying (67%), domestic (92%), and White (58%) (Table 1). Respondents were representative of all from all 11 Faculties across 26 programs. A sizable percentage of the participants (41%) qualified for financial assistance, and almost all participants had other commitments outside of school such as working part-time (23%), volunteering (26%), extracurricular activities (38%) and caregiving responsibilities (6%).

Data were also collected from educators at Western University; 100 educators responded to the quantitative questions and 90 educators responded to the qualitative questions. Participants were evenly distributed as female-identifying (48%) and male-identifying (50%), with work experience ranging from 2 to 40 years (Table 2). Respondents were white (76%) and represented 9 out of 11 Faculties across 17 programs. In terms of job positions, 48% of educators were tenured, 13% were tenure-track, and the remaining 44% were contract faculty members (25% full-time and 18% part-time). All educators reported having other commitments outside of their academic teaching such as full-time (19%) and part-time (7%) jobs, volunteer work (17%), extracurricular activities (19%), and caregiving responsibilities (29%).

3.2 Five dimensions of flexibility: student and educator preferences

Flexibility preferences across the five dimensions are reported below as the mean and standard deviation for students ($\bar{x}_{\text{Students}}$), followed by educators ($\bar{x}_{\text{Educators}}$). These findings are based on survey questionnaire results assessed on a 5-point Likert scale. In terms of deadlines (Table 3), both students and educators responded favorably to working together to establish deadlines

TABLE 1 Student demographics.

Demographic characteristic	N	%
<i>Degree level</i>		
Undergraduate	256	81
Graduate	59	19
<i>Gender</i>		
Female	212	67
Male	75	24
Other	28	9
<i>Residency status</i>		
Domestic	289	92
International	26	8
<i>Race</i>		
White	184	58
Asian (East, South, Southeast)	76	24
Middle Eastern	27	9
Latino	11	3
Indigenous	7	2
Black	5	2
Other	5	2
<i>Faculty</i>		
Science	86	27
Health Science	76	24
Social Science	53	17
Medicine and Dentistry	37	12
Engineering	20	6
Music	6	2
Arts and Humanities	16	5
Business	13	4
Law	3	1
Information and Media Studies	3	1
Education	2	1
<i>Financial Assistance</i>		
Yes	130	41
No	120	38
Prefer not to say	65	21
<i>Other commitments</i>		
Full-time job	3	1
Part-time job	73	23
Volunteer	82	26
Extracurriculars	120	38
Caregiving	18	6
Other	19	6

($\bar{x}_{\text{Students}} = 4.08 \pm 0.89$, $\bar{x}_{\text{Educators}} = 4.16 \pm 0.88$) and including grace periods ($\bar{x}_{\text{Students}} = 4.27 \pm 1.06$, $\bar{x}_{\text{Educators}} = 4.08 \pm 1.15$). Students however, preferred to set their own deadlines more than educators

TABLE 2 Educator demographics.

Demographic	N	%
<i>Gender</i>		
Female	48	48
Male	50	50
Other	2	2
<i>Race</i>		
White	76	76
Asian (East, South, Southeast)	8	8
Middle Eastern	3	3
Latino	1	1
Indigenous	2	2
Black	2	2
Other	8	8
<i>Faculty</i>		
Science	24	24
Health science	3	3
Social science	6	6
Medicine and dentistry	26	26
Engineering	7	7
Music	13	13
Business	6	6
Law	2	2
Information and media studies	13	13
<i>Work experience</i>		
1–5 years	21	21
6–10 years	26	26
11–20 years	38	38
20+ years	15	15
<i>Job position</i>		
Tenured	43	43
Tenure-track	13	13
Full-time contract	25	25
Part-time contract	19	19
<i>Other commitments</i>		
Full-time job	19	19
Part-time job	7	7
Volunteer	17	17
Extracurriculars	19	19
Caregiving	29	29
Other	9	9

($\bar{x}_{\text{Students}} = 3.16 \pm 1.2$, $\bar{x}_{\text{Educators}} = 2.14 \pm 1.03$). With respect to assessments (Table 4), students had a stronger preference for non-timed assessments ($\bar{x}_{\text{Students}} = 3.92 \pm 1.10$, $\bar{x}_{\text{Educators}} = 3.28 \pm 1.24$) compared to timed assessments ($\bar{x}_{\text{Students}} = 2.41 \pm 1.28$, $\bar{x}_{\text{Educators}} = 3.17 \pm 1.2$). Both groups had similar preferences for take-home assessments ($\bar{x}_{\text{Students}} = 3.97 \pm 1.16$, $\bar{x}_{\text{Educators}} = 3.61 \pm 1.04$).

TABLE 3 Students' and educator's deadline preferences.

Deadline preferences	Students			Educators		
	N	%	Mean ± SD	N	%	Mean ± SD
<i>Students to set their own deadlines</i>						
Strongly disagree	22	7		30	30	
Disagree	98	31		41	41	
Neither agree nor disagree	48	15		13	13	
Agree	103	33		14	14	
Strongly agree	44	14		2	2	
			3.16 ± 1.2			2.14 ± 1.03
<i>Students and educators to set deadlines together</i>						
Strongly disagree	6	2		3	3	
Disagree	19	6		3	3	
Neither agree nor disagree	22	7		11	11	
Agree	166	53		44	44	
Strongly agree	102	32		39	39	
			4.08 ± 0.89			4.16 ± 0.88
<i>Students to follow pre-established deadlines</i>						
Strongly disagree	5	1		0	0	
Disagree	43	14		4	4	
Neither agree nor disagree	65	21		9	9	
Agree	146	46		43	43	
Strongly agree	56	18		44	44	
			3.65 ± 0.98			4.25 ± 0.81
<i>Students to follow deadlines with grace periods</i>						
Strongly disagree	11	3		3	3	
Disagree	22	7		10	10	
Neither agree nor disagree	18	6		9	9	
Agree	86	27		29	29	
Strongly agree	178	57		49	49	
			4.27 ± 1.06			4.08 ± 1.15

Moreover, although both groups had similar preferences regarding independent assessments ($\bar{x}_{\text{Students}} = 4.36 \pm 0.76$, $\bar{x}_{\text{Educators}} = 4.00 \pm 0.95$), students strongly preferred this format to group assessments ($\bar{x}_{\text{Students}} = 2.24 \pm 1.22$, $\bar{x}_{\text{Educators}} = 3.28 \pm 1.21$). As for grading and weighting (Table 5), both groups preferred numerical grades ($\bar{x}_{\text{Students}} = 4.25 \pm 0.94$, $\bar{x}_{\text{Educators}} = 3.86 \pm 1.11$) more than pass and fail grades, as well as more frequent, lower-weight tasks ($\bar{x}_{\text{Students}} = 3.79 \pm 1.18$, $\bar{x}_{\text{Educators}} = 3.58 \pm 1.07$). Although both groups seemed to be in favor of flexible weighting options, students had a slightly higher preference relative to educators ($\bar{x}_{\text{Students}} = 3.79 \pm 1.18$, $\bar{x}_{\text{Educators}} = 3.58 \pm 1.07$). For modality (Table 6), both students and educators preferred in-person ($\bar{x}_{\text{Students}} = 3.94 \pm 1.03$, $\bar{x}_{\text{Educators}} = 4.27 \pm 0.82$) delivery models relative to online. However, responses were more polarized when it came to hybrid courses, with students having a stronger preference relative to educators ($\bar{x}_{\text{Students}} = 3.97 \pm 1.30$, $\bar{x}_{\text{Educators}} = 2.48 \pm 1.35$). Lastly, for course correspondence (Table 7), students and educators preferred

in-person communication ($\bar{x}_{\text{Students}} = 3.95 \pm 1.07$, $\bar{x}_{\text{Educators}} = 4.05 \pm 0.90$) more than online. Additionally, both groups preferred email communication ($\bar{x}_{\text{Students}} = 3.61 \pm 1.06$, $\bar{x}_{\text{Educators}} = 3.23 \pm 1.21$) over other forms of communication.

3.3 Emerging themes on flexibility

Qualitative data were collected from 215 students and 90 educators in response to three open-ended survey questions. Data were analyzed and four emerging themes were identified: (1) Flexibility humanizes teaching and learning, (2) Flexibility recognizes diverse student populations, (3) Flexibility provides broad accommodation and increases accessibility, and (4) Flexibility can offer immediate relief but poses long-term consequences. Each of the themes are described below and supported with quotes from student (St) and educator (Ed) participants.

TABLE 4 Students' and educator's assessment preferences.

Assessment preference	Students			Educators		
	N	%	Mean ± SD	N	%	Mean ± SD
<i>Timed assessments</i>						
Strongly disagree	90	28		12	12	
Disagree	112	36		17	17	
Neither agree nor disagree	34	11		28	28	
Agree	53	17		27	27	
Strongly agree	26	8	2.41 ± 1.28	16	16	3.17 ± 1.24
<i>Non-timed assessments</i>						
Strongly disagree	9	3		11	11	
Disagree	34	11		16	16	
Neither agree nor disagree	43	14		25	25	
Agree	114	36		30	30	
Strongly agree	115	36	3.92 ± 1.10	18	18	3.28 ± 1.24
<i>Take-home assessments</i>						
Strongly disagree	15	5		1	1	
Disagree	10	31		16	16	
Neither agree nor disagree	35	11		25	25	
Agree	103	33		35	35	
Strongly agree	131	42	3.97 ± 1.16	23	23	3.61 ± 1.04
<i>Online assessments</i>						
Strongly disagree	23	7		23	23	
Disagree	43	14		15	15	
Neither agree nor disagree	63	20		31	31	
Agree	104	33		22	22	
Strongly agree	82	26	3.56 ± 1.22	9	9	2.81 ± 1.26
<i>Group assessments</i>						
Strongly disagree	114	36		11	11	
Disagree	90	29		13	13	
Neither agree nor disagree	44	14		26	26	
Agree	54	17		35	35	
Strongly agree	13	4	2.24 ± 1.22	15	15	3.28 ± 1.21
<i>Independent assessments</i>						
Strongly disagree	2	1		2	2	
Disagree	0	0		3	3	
Neither agree nor disagree	41	13		19	19	
Agree	110	35		42	42	
Strongly agree	162	51	4.36 ± 0.76	34	34	4.00 ± 0.95

3.3.1 Flexibility humanizes teaching and learning

Students and educators discovered that flexibility in teaching and learning had the remarkable ability to humanize educational experience. Educators found that implementing flexibility was more humane, saying that it provided a “human centered approach to education” (Ed23). For students, flexibility was not about leniency, but rather they noted it as being “a demonstration of empathy and understanding of the unpredictable nature of life”

(St12). Both students and educators acknowledged the inevitability of people getting sick and having to deal with other ‘life’ circumstances. This acknowledgement led to students saying flexibility allowed them to feel “seen as an adult person who is capable and responsible” (St52).

The availability of flexibility made students feel like their institution and educators genuinely cared about them, with some saying, “I felt more than just a number” (St7). Many students voiced

TABLE 5 Students' and educators' grading and weighting preferences.

Grading and weighting preferences	Students			Educators		
	N	%	Mean ± SD	N	%	Mean ± SD
<i>Numerical grades</i>						
Strongly disagree	6	2		5	5	
Disagree	11	4		9	9	
Neither agree nor disagree	36	11		14	14	
Agree	103	33		40	40	
Strongly agree	159	50	4.25 ± 0.94	32	32	3.86 ± 1.11
<i>Pass/fail grades</i>						
Strongly disagree	68	21		16	16	
Disagree	72	23		30	3	
Neither agree nor disagree	59	19		25	25	
Agree	59	19		19	19	
Strongly agree	57	18	2.88 ± 1.41	10	10	2.76 ± 1.21
<i>Flexible weighting options (i.e., drop lowest)</i>						
Strongly disagree	4	1		8	8	
Disagree	6	2		9	9	
Neither agree nor disagree	17	5		20	20	
Agree	65	21		29	29	
Strongly agree	223	71	4.57 ± 0.79	34	34	3.71 ± 1.24
<i>More frequent, lower weight tasks</i>						
Strongly disagree	13	4		5	5	
Disagree	42	13		10	10	
Neither agree nor disagree	48	15		25	25	
Agree	103	32		40	40	
Strongly agree	109	34	3.79 ± 1.18	20	20	3.58 ± 1.07
<i>Less frequent, higher weight tasks</i>						
Strongly disagree	56	18		4	4	
Disagree	118	37		20	20	
Neither agree nor disagree	57	18		32	32	
Agree	65	21		32	32	
Strongly agree	19	6	2.60 ± 1.17	12	12	3.26 ± 1.03

their appreciation for their educators for understanding their struggles and supporting them by providing flexibility: “All of my educators have been wonderful in allowing flexibility for extenuating circumstances, which has been wonderful and has made me feel valued within the institution” (St105).

Due to feeling cared for and valued, students highlighted that this led to increased engagement and work quality. One student emphasized this by saying, “When teachers provide a flexible atmosphere, where they are actually trying to help you by accommodating you and understanding, it makes you relax and excel at your work” (St42). Many educators reinforced that through flexibility, students enjoyed coming to class and produced higher quality work. Educators expressed this positive aspect of flexibility by saying, “Flexibility increases engagement, creates an atmosphere of kindness and compassion, and helps students become more autonomous” (Ed76).

Both students and educators highlighted how crucial the compassion underlying flexibility was to student success. Some educators emphasized the importance of flexibility by saying: “Flexibility is a human need! It should be a human right. We know, thanks to real evidence from real studies, that students benefit from flexibility tools like upgrading, flipped classrooms, strongly scaffolded group work experiences, and shorter work weeks. We need to take this evidence seriously” (Ed97).

3.3.2 Flexibility recognizes diverse student populations

Flexibility in education allowed for a powerful recognition of the diverse student populations that exist within our educational systems. It was acknowledged by educators that students’ needs vary, and thus, they provided flexibility because as they stated, “I understand that students miss class for various reasons” (Ed19). Many students

TABLE 6 Students' and educators' modality preferences.

Modality preferences	Students			Educators		
	N	%	Mean ± SD	N	%	Mean ± SD
<i>Online courses</i>						
Strongly disagree	73	23		30	30	
Disagree	88	28		35	35	
Neither agree nor disagree	59	19		17	17	
Agree	53	17		13	13	
Strongly agree	42	13	2.69 ± 1.35	5	5	2.28 ± 1.17
<i>In-person</i>						
Strongly disagree	6	2		1	1	
Disagree	28	9		2	2	
Neither agree nor disagree	51	16		12	12	
Agree	122	39		39	39	
Strongly agree	108	34	3.94 ± 1.03	46	46	4.27 ± 0.82
<i>Blended courses (online and in-person components)</i>						
Strongly disagree	40	13		11	11	
Disagree	41	13		12	12	
Neither agree nor disagree	38	12		24	24	
Agree	100	32		26	26	
Strongly agree	96	30	3.54 ± 1.37	27	27	3.47 ± 1.29
<i>Hybrid courses (in-person and online delivery)</i>						
Strongly disagree	24	8		34	34	
Disagree	29	9		20	20	
Neither agree nor disagree	34	11		18	18	
Agree	72	23		20	20	
Strongly agree	156	49	3.97 ± 1.30	8	8	2.48 ± 1.35

highlighted through their responses that flexibility has given them more freedom by saying, “It allowed me to balance my priorities which do not always lie in education” (St36). For many students, family was expressed as an important priority, with many saying they had to care for ill parents, and grandparents.

Other students shared how flexibility catered to their diverse backgrounds and life situations. For example, some mature students stated that flexibility allowed their unique situation to be considered by saying, “Flexibility gave me time to adjust and get back into the routine of being in school while balancing other responsibilities” (St81). Other students who uprooted to Canada for their education emphasized the importance of flexibility by saying, “It recognized the large sacrifice of moving to a new country” (St47).

Both students and educators voiced the difficulties of pursuing an education in today’s economic situation. Many students noted that they “do not have the financial flexibility to do school full time without working full time” (St18). Flexibility allowed for consideration of students’ varying financial situations and provided opportunities for success despite these constraints: “I rely on flexibility because being a student while struggling financially requires me to work three part-time jobs, and takes time away from schoolwork, and even extracurricular opportunities that would benefit my future” (St154).

Mental illness and learning disabilities were other factors that impacted student’ lives. Educators remarked on the current rise of ADHD, depression and anxiety among their students and stated that “Students have good reasons for wanting flexibility and should not looked upon with suspicion” (Ed3). For many of the student participants, flexibility allowed for an inclusive approach that respected their diversity, while avoiding generalizations or biases: “I usually feel really ignored and feel like my disability is belittled. I have often been told that it’s not real and I do not need flexibility and that it’s just making it too easy for me or it’s cheating when it’s not. Flexibility provided by my teachers made me feel so human and normal despite my learning disability” (St164).

3.3.3 Flexibility provides broad accommodation and increases accessibility

In addition to recognizing diverse student populations, flexibility allowed students to engage in education regardless of the range of their personal circumstances or physical abilities. This was crucial to students who faced ‘below the iceberg’ challenges that would be difficult to receive accommodations for, which one student described as “struggles with focusing due to potentially undiagnosed ADHD, relationship challenges, disordered eating, all which draw mental capacity away from being able to fulfill academic duties”

TABLE 7 Students' and educators' course correspondence preferences.

Course correspondence	Students			Educators		
	N	%	Mean \pm SD	N	%	Mean \pm SD
<i>In-person meetings</i>						
Strongly disagree	10	3		1	1	
Disagree	27	9		5	5	
Neither agree nor disagree	46	15		18	18	
Agree	115	36		41	41	
Strongly agree	117	37	3.95 \pm 1.07	35	35	4.05 \pm 0.90
<i>Online meetings</i>						
Strongly disagree	57	18		10	10	
Disagree	81	26		17	17	
Neither agree nor disagree	66	21		26	26	
Agree	88	28		32	32	
Strongly agree	23	7	2.80 \pm 1.23	15	15	3.23 \pm 1.21
<i>Group meetings</i>						
Strongly disagree	55	17		0	0	
Disagree	66	21		11	11	
Neither agree nor disagree	87	28		34	34	
Agree	86	27		42	42	
Strongly agree	21	7	2.84 \pm 1.19	13	13	3.55 \pm 0.86
<i>Email communication</i>						
Strongly disagree	10	3		8	8	
Disagree	41	13		24	24	
Neither agree nor disagree	72	23		22	22	
Agree	127	40		29	29	
Strongly agree	65	21	3.61 \pm 1.06	17	17	3.23 \pm 1.21
<i>Other forms of correspondence (e.g., Microsoft Teams)</i>						
Strongly disagree	69	22		20	20	
Disagree	81	26		31	31	
Neither agree nor disagree	98	31		26	26	
Agree	54	17		16	16	
Strongly agree	13	4	2.56 \pm 1.13	7	7	2.59 \pm 1.18

(St89). Flexibility also accommodated numerous students who faced invisible disabilities: “My invisible disability results from a chronic illness that flares unexpectedly. I have been completely fine one day and hospitalized the next; only to appear totally fine when I come back. Being able to self-declare means that I do not feel obligated to disclose personal information, emotional situations, or justify my illness as being severe enough that it impacts me. Whenever an educator has a no-questions-asked, just notify me extension or absence policy, it is a huge relief” (St78).

Many of the student participants described the difficulties they faced when seeking official accommodation for their disabilities or extenuating circumstances. An educator stated that flexibility addresses this issue as it ‘reduced the barriers to obtaining academic considerations’ (Ed56). Other educators noted that “Giving students on opportunity to miss minor course components without requiring documentation is important” (Ed38).

Receiving flexibility without documentation was integral to students who could not afford physician notes, or who did not have the time and resources to receive documentation. Students emphasized that they found flexibility to increase accessibility by saying, “It allowed me to get consideration under circumstances where physician appointments were not possible” (St64) and “It was helpful to not have so many hoops to jump through in order to get accommodation” (St174).

3.3.4 Flexibility can offer immediate relief but poses long-term consequences

The positive impact on students' mental health was noted by both students and educators. There were many educators who stated that “Flexibility is very good, excellent, and better for students' mental health and well-being” (Ed16). Similarly, students said that “In general, flexibility has helped improve my mental health in the

moment because it allowed me to focus on the most pressing issue” (St49). However, flexibility had several drawbacks, which students and educators outlined. For one, procrastination was a common occurrence among students, which increased their stress down the line: “Flexibility does result in reduced stress, however the longer I go over the deadline, the more I delay my work and feel the need to perform well (because I got the extra time). Therefore, my stress also increases” (St124).

Educators also seemed to agree that although flexibility had its benefits, there were instances in which misuse or procrastination negatively impacted students: “I see it as being beneficial (in some circumstances), but I also know that some students misused the system and resulted in issues where they actually performed more poorly, as they kept procrastinating assignments” (Ed36).

Moreover, some students and educators felt that by utilizing flexibility, students were missing learning important skills such as time management, and prioritization, which are essential for student development: “As a student, I know the importance of meeting deadlines on time even under stressful situations and believe that this is a necessary skill to gain for after graduation as well. Although flexibility did help with my mental health, I think it failed to teach me skills” (St94).

Lastly, despite flexibility having general positive effects on students’ mental health, the consensus among educators was that flexibility negatively impacted their mental health. Educators said that flexibility “was really difficult as many faculty felt isolated in needing to manage these new forms of requests without additional support or resources” (Ed57) and “increased my workload considerably” (Ed19). Thus, although many educators supported flexibility, and implemented it to improve students’ educational experience, it was emphasized that its negative long-term consequences needed to be addressed:

“I agree in principle that this is a good thing to do, but most of the work gets downloaded onto the instructor to help the students catch up. While we try our best to be flexible, flexibility cannot come at the expense of the teacher’s time over the student” (Ed57).

4 Discussion

The quantitative component of this study reveals that overall, there is a general alignment between the preferences of students and educators across various dimensions of flexibility. Regarding deadlines, students and educators expressed a preference for establishing deadlines collaboratively and incorporating no-penalty grace periods. This finding is consistent with previous work, which examined the effects of instructor set, flexible instructor set, and self-imposed deadlines on undergraduate students (Wang, 2011). Additionally, a study conducted by Schroeder et al. (2019) investigated graduate students’ use of a ‘five-day late bank’ on two assignments without penalty and found that students felt that this flexibility reduced their stress and improved their assignment quality. Moreover, deadline flexibility is perceived positively by students as it allows them to better manage their academic workload, personal responsibilities, and stress (Boswell, 2023). Similarly, educators acknowledge the challenges students face with overlapping deadlines and priorities, thus recognizing the value of providing flexibility to alleviate stress (Beer et al., 2023). However, despite the evident benefits, educators encounter obstacles in implementing flexible deadlines. For example,

Xavier and Meneses (2021) highlight the difficulties posed by large class sizes, which can hinder their ability to provide feedback and support while managing flexible deadlines. Moreover, educators face internal course deadlines, and as such, are limited by how much flexibility they can provide. Finally, educators have expressed concern about the negative impact of excessive deadline flexibility on educational quality and learning outcomes (Xavier and Meneses, 2021). Thus, it is important for students and educators to collaborate in determining an appropriate balance of flexibility in deadlines to optimize learning experiences and outcomes.

In terms of assessments, students and educators demonstrated a preference for non-timed, and take-home assessments. This could be attributed to the fact that flexibility with assessments allows students to personalize their learning based on their strengths and needs, which according to Rideout (2018), can promote students’ engagement and academic achievement. These results are similar to a study conducted by Wanner and Palmer (2015) exploring student and teacher perceptions about flexible learning, that found that the majority of teachers in their study favored student involvement in the assessment process, as they believed it led to better assessments. When it came to grading and weighting, both students and educators favored more frequent, lower-weight tasks. Additionally, a higher percentage of students compared to educators expressed a preference for flexible weighting options, indicating their desire for a more personalized approach to grading. Pacharn et al. (2013) investigated offering students flexible weighting options and found that it provided students with a sense of autonomy and control over their learning. The reason students had a higher preference for flexible weighting options compared to educators could be attributed to educators’ course policy constraints, and commitment to providing equal treatment to students (Xavier and Meneses, 2021).

Regarding course modality, both students and educators preferred in-person formats over online-learning. Numerous studies have investigated student and educator perspectives of online learning in higher education (Amir et al., 2020; Benitez, 2023). More specifically, the effectiveness of online learning during the pandemic has been extensively reviewed by Meng et al. (2024), and it was concluded there is no consensus on this topic. When comparing the effectiveness of online learning to in-person during the pandemic, studies consistently reported that students perceived online learning as less effective (Alawamleh et al., 2020; Almahasees et al., 2021; Zhang and Chen, 2023). Additional challenges associated with online learning that became prevalent during the pandemic include limited access to technology equipment and resources, as well as an unstable internet connection (Amir et al., 2020; Kourouma et al., 2022). Given our findings, combined with the literature, discussions in higher education need to expand beyond online versus in-person learning to explore modalities and further explore more flexible options.

For blended learning, both students and educators had similar preferences; however, there was a disparity with respect to their preferences for hybrid courses, with a higher percentage of students favoring this modality. For the purposes of this study, blended learning was defined as having a mix of online and in-person components, whereas hybrid learning was defined as simultaneous online and in-person delivery options. Based on our data, this may be attributed to hybrid learning providing the benefits of online learning, while still offering the students the opportunity to attend class in-person as opposed to being restricted to one option. This is supported by Pesen

and Oral (2016), who reported hybrid learning as an optimal approach that combined the most beneficial elements of in-person and online learning. Student participants in our study also stated that hybrid learning, featuring recorded lectures, was beneficial as it allowed them to review course materials on their own time. This feature, highlighted in a study by Al-Qudah (2024), has notably improved accessibility. Nevertheless, it is crucial to acknowledge the barriers and obstacles educators face when implementing hybrid learning. Such approaches demand increased effort and a substantial time commitment for educators (Wanner and Palmer, 2015). When asked about hybrid and blended learning modalities, educators stated that hybrid learning required significant time commitments and technical support. However, educators felt that blended learning was a good compromise, as it provided a degree of flexibility and accessibility without significantly impacting their workload. Considering educator perspectives, blended learning might be a more sustainable option.

There are notable advantages to providing flexibility to students with respect to aspects such as mode, deadlines, and assessments, which may be motivating students' preferences across the various flexibility dimensions. For one, it promotes self-regulated learning as students are given the opportunity to contribute their input on decisions that are traditionally made by educators (Pacharn et al., 2013). Moreover, allowing students to be involved in choices regarding assessments or deadlines encourages students to commit to goals, which can heighten their academic self-efficacy and subsequently improve their academic performance (Artino, 2012; Schunk and Mullen, 2012). Differences in preferences for educators could be rooted in their concerns regarding sustainability, education quality and technological proficiency (Daniel et al., 2009; Alston et al., 2017; McCarthy et al., 2022). This aligns with a study by Alqahtani et al. (2023) exploring educators' perspectives on the transition to online learning during the pandemic. Their study found varying levels of accessibility to support and assistance, resulting in significant disparities in educators' preparedness. Additionally, digital proficiency emerged as a crucial factor influencing educators' comfort in online teaching, which underscored the importance of investing in proper support for educators. Ultimately, flexibility should be regarded as a shared attribute of both learners and educators. As our results show, students and educators have valuable insights and perspectives that inform their preferences for flexibility. By prioritizing collaboration and dialog between students and educators, institutions can foster an environment that benefits both parties. Our qualitative findings shed light on the broader implications of flexibility in teaching and learning. Both students and educators recognized the humanizing effect of flexibility. Students expressed appreciation for the care and value they felt when provided flexibility, leading to increased engagement and higher quality work. Educators perceived flexibility as a more humane approach that centered on the needs and circumstances of students, fostering empathy, compassion, and understanding. These perceptions align with existing literature demonstrating that students perform better and enjoy their course more when they feel their instructors care about them, and when they feel connected to their instructors (Wilson, 2008; Okech et al., 2014). Another study investigating students' experiences with remote learning found that many students deeply appreciate professors' flexibility, which humanizes professors, and helps students to feel more visible (Basch et al., 2022). These findings highlight the positive impacts of flexibility on students' sense of belonging, motivation, and their overall educational experience.

Moreover, flexibility was found to be a means of recognizing and accommodating diverse student populations. Gaudry and Lorenz (2018) noted that often, classroom policies are often written for a 'normal' student population, which historically has been those that are white, cis-male, heterosexual, financially stable, and lack disabilities. However, that assumption is no longer true; we found that educators acknowledged the varying needs of students and the importance of providing flexibility to support their unique circumstances. Indeed, as seen in our participant demographics and open-ended responses, current higher education students have various abilities, backgrounds, responsibilities, and financial situations. Studies have shown that students who have competing responsibilities such as work, children, and family struggle academically (Brownson et al., 2016; Moore and Greenland, 2017). However, as Gillborn (2015) noted, implementing flexibility acknowledges the complex and interconnected nature of students' identities and limitations. This notion was reflected in our study's participant responses, which emphasized the freedom and balance that flexibility afforded them, allowing them to prioritize multiple responsibilities and navigate the challenges of diverse backgrounds and life situations.

Our research also showed that flexibility provided students with equal opportunities to engage in education and access necessary accommodations. Flexibility was particularly beneficial for students with invisible disabilities, or those who faced barriers in accessing documentation required for accommodation. Similar to our findings, the literature shows that not all post-secondary students with disabilities are able to receive a formal diagnosis, and those who are, may choose not to disclose their disability status due to concerns regarding stigma and discrimination (Newman and Madaus, 2015). Moreover, the ability of students to self-advocate for flexibility can be a great barrier for some if they are unaware of what they need to be successful (Veletsianos and Houlden, 2020). In recognizing that flexibility offers broad accommodation and increased accessibility, it is crucial that we move beyond accommodating specific student needs and instead provide flexibility policies that will benefit all students.

Although students reported immediate relief and improved mental health because of the flexibility they were offered, there were a subset of potential drawbacks to consider. Both students and educators highlighted procrastination as a common challenge among students, which led to increased student stress and compromised work quality. Previous research investigating flexibility in assessments has identified a delayed effort phenomenon, in which some students would defer assessment completion, and thus their final grade was solely determined by their performance on the final examination (Cook, 2001). Additionally, concerns were raised about the potential impact of flexibility on students' development of essential skills such as time management and prioritization. This concern has been debated in relation to the relevance of strict deadlines in the 'real world', with arguments highlighting that rescheduling is often possible for many deadlines when necessary (Warner, 2019). However, the impact of flexibility on skill development needs to be further investigated to draw evidence-based conclusions. Furthermore, educators expressed a negative impact of flexibility on their own mental health and workload due to additional responsibilities and lack of support in managing flexible policies. An increase in workload because of flexibility was mirrored in a study investigating educators' perspectives regarding social work online education, which found that educators

faced a substantial increase with their workload when transitioning to online teaching (McCarthy et al., 2022).

5 Conclusion

Our study acknowledges the broader scope of flexibility, emphasizing the importance of considering various dimensions to cater to the diverse needs of learners. Survey analysis reveals an alignment between student and educator preferences across flexibility dimensions, indicating a shared recognition of its benefits, such as the ability to humanize learning, recognize diverse students, broaden accommodation, and increase accessibility. Noteworthy is the preference of collaborative deadlines, non-timed and take-home assignments, and more frequent, lower-weight grading tasks. Additionally, the study highlights the disparity in preferences of course modality, with a higher percentage of students favoring hybrid courses over online learning. However, potential drawbacks of increased flexibility include challenges such as procrastination, increased stress, and compromised work quality among students. Educators expressed concerns about the negative impact on their own mental health and workload due to additional responsibilities and a lack of support in managing flexible policies. The study also highlights the need for further investigation into the impact of flexibility on essential skill development, particularly in time management and prioritization.

Considering these findings, our study emphasizes the crucial role flexibility plays in shaping the teaching and learning environment. This study has direct implications for educators and policymakers. Educators can refine their teaching strategies to align closely with students' preferences and needs, ultimately enhancing their overall educational quality and experience. Moreover, by recognizing the perceived benefits and drawbacks of various elements of flexibility, policymakers can develop guidelines that encourage the effective implementation of flexibility into the curriculum.

Overall, this study has many strengths, as it draws from a large sample size of students and educators at Western University. However, one limitation of this study is that the findings may not be applicable to other academic institutions. Future studies can determine if similar findings and themes are present across institutions with different student populations.

Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

References

- Alawamleh, M., Al-Twait, L., and Al-Saht, G. (2020). The effect of online learning on communication between instructors and students during Covid-19 pandemic. *Asian Educ. Dev. Stud.* 11, 380–400. doi: 10.1108/AEDS-06-2020-0131
- Allen, M. (2017). *The SAGE Encyclopedia of Communication Research Methods*. (Vols. 1-4). Thousand Oaks, CA: SAGE Publications, Inc. Available at: doi: 10.4135/9781483381411

Ethics statement

The studies involving humans were approved by Western University Non Medical Research Ethics Board. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AG: Conceptualization, Data curation, Formal analysis, Methodology, Visualization, Writing – original draft, Writing – review & editing. DB: Conceptualization, Investigation, Methodology, Supervision, Writing – review & editing. NC: Conceptualization, Data curation, Investigation, Methodology, Supervision, Visualization, Writing – original draft, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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- Almahasees, Z., Mohsen, K., and Amin, M. O. (2021). Faculty's and students' perceptions of online learning during COVID-19. *Fronti. Educ.* 6:470. doi: 10.3389/feduc.2021.638470

- Alqahtani, J. S., Mendes, R. G., Triches, M. I., de Oliveira Sato, T., Sreedharan, J. K., Aldahir, A. M., et al. (2023). Perspectives, practices, and challenges of online teaching during COVID-19 pandemic: a multinational survey. *Heliyon* 9:e19102. doi: 10.1016/j.heliyon.2023.e19102

- Al-Qudah, E. M. (2024). The effectiveness of recorded lectures on university students' achievement. *J. Law Sustain. Dev.* 12:e2537. doi: 10.55908/sdgs.v12i1.2537
- Alston, S., Moore, C., and Thomas, M. (2017). Strategies for enhancing online teaching in social work education. *J. Hum. Behav. Soc. Environ.* 27, 1–10. doi: 10.1080/10911359.2017.1311817
- Amir, L. R., Tanti, I., Maharani, D. A., Wimardhani, Y. S., Julia, V., Sulijaya, B., et al. (2020). Student perspective of classroom and distance learning during COVID-19 pandemic in the undergraduate dental study program Universitas Indonesia. *BMC Med. Educ.* 20:392. doi: 10.1186/s12909-020-02312-0
- Artino, A. R. (2012). Academic self-efficacy: from educational theory to instructional practice. *Perspect. Med. Educ.* 1, 76–85. doi: 10.1007/s40037-012-0012-5
- Barnett, R. (2014). *Conditions of flexibility: Securing a more responsive higher education system* Higher Education Academy.
- Basch, S., Covarrubias, R., and Wang, S. H. (2022). 'Minoritized students' experiences with pandemic-era remote learning inform ways of expanding access'. *Scholarship of Teaching and Learning in Psychology*, 1–14. doi: 10.1037/stl0000330
- Beer, C., Roy, S., and Ames, K. (2023). Is it really flexible? Examining definitions of flexibility against contemporary practice in online education. *J. Furth. High. Educ.* 47, 255–264. doi: 10.1080/0309877X.2022.2106125
- Benitez, M. (2023). 'Teacher's perspective on the implementation of online learning in one of the higher education institutions of Southern Philippines', Science International (Lahore), 35, 387–389. Available at: <https://www.researchgate.net/publication/377400086>
- Boswell, S. (2023). 'Students' use and perceptions of a due date extension policy'. *J. Effect. Teach. High. Educ.* 6, 1–16. doi: 10.36021/jethe.v6i2.379
- Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. *Qual. Res. Psychol.* 3, 77–101. doi: 10.1191/1478088706qp063oa
- Brownson, C., Drum, D. J., Swanbrow Becker, M. A., Saathoff, A., and Hentschel, E. (2016). Distress and suicidality in higher education: implications for population-oriented prevention paradigms. *J. Coll. Stud. Psychother.* 30, 98–113. doi: 10.1080/87568225.2016.1140978
- Butcher, J., and Rose-Adams, J. (2015). Part-time learners in open and distance learning: revisiting the critical importance of choice, flexibility and employability. *Open Learn. J. Open Dist. e-Learning* 30, 127–137. doi: 10.1080/02680513.2015.1055719
- Collis, B., and Moonen, J. (2011). Flexibilidad en la educación superior: Revisión de expectativas. *Comunicar: Revista Científica de Comunicación y Educación* 19, 15–25. doi: 10.3916/C37-2011-02-01
- Cook, A. (2001). Assessing the use of flexible assessment. *Assess. Eval. High. Educ.* 26, 539–549. doi: 10.1080/02602930120093878
- Daniel, J., Kanwar, A., and Uvalić-Trumbić, S. (2009). Breaking higher Education's Iron triangle: access, cost, and quality. *Change Mag. High. Learn.* 41, 30–35. doi: 10.3200/CHNG.41.2.30-35
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment. *Int. J. Technol. Des. Educ.* 13, 255–272. doi: 10.1023/A:1026125427344
- Fawns, T. (2019). Postdigital education in design and practice. *Postdig. Sci. Educ.* 1, 132–145. doi: 10.1007/s42438-018-0021-8
- Gaudry, A., and Lorenz, D. E. (2018). "Decolonization for the Masses?" in L. T. Smith, E. Tuck and K. W. Yang. (eds) *Indigenous and Decolonizing Studies in Education*. 1st edn. London (England: Routledge).
- Gillborn, D. (2015). Intersectionality, critical race theory, and the primacy of racism: race, class, gender, and disability in education. *Qual. Inq.* 21, 277–287. doi: 10.1177/1077800414557827
- Gordon, N. (2014). *Flexible pedagogies: Technology-enhanced learning*. Hull, England: The Higher Education Academy, 1–24.
- Guppy, N., Verpoorten, D., Boud, D., Lin, L., Tai, J., and Bartolic, S. (2022). The post-COVID-19 future of digital learning in higher education: views from educators, students, and other professionals in six countries. *Br. J. Educ. Technol.* 53, 1750–1765. doi: 10.1111/bjet.13212 <https://doi.org/10.1111/bjet.13212>
- Kourouma, M., Warren, R., Jackson, L., Atkins-Ball, D., and Dora, R. (2022). Multimodal course design and implementation using LEML and LMS for instructional alignment. *Int. J. Manag. Inform. Technol.* 14, 1–21. doi: 10.5121/ijmit.2022.14301
- Li, K. C. (2014). How flinderflexible do students prefer their learning to be? *Asian Assoc. Open Univ. J.* 9, 35–46. doi: 10.1108/AAOUJ-09-01-2014-B004
- Li, K. C., and Wong, B. Y. Y. (2018). "Revisiting the definitions and implementation of flexible learning" in *Innovations in open and flexible education*. eds. K. C. Li, K. S. Yuen and B. T. M. Wong (Singapore: Springer) (Education Innovation Series).
- Linder, K. E. (2017). "Fundamentals of Hybrid Teaching and Learning". *New Directions for Teaching and Learning*, 2017, 11–18. doi: 10.1002/tl.20222
- Lockee, B. B., and Clark-Stallkamp, R. (2022). Pressure on the system: increasing flexible learning through distance education. *Distance Educ.* 43, 342–348. doi: 10.1080/01587919.2022.2064829
- McCarthy, K. M., Glassburn, S. L., and Dennis, S. R. (2022). Transitioning to online teaching: a phenomenological analysis of social work educator perspectives. *Soc. Work. Educ.* 41, 641–659. doi: 10.1080/02615479.2020.1869206
- Meng, W., Yu, L., Liu, C., Pan, N., Pang, X., Zhu, Y., et al. (2024). "A systematic review of the effectiveness of online learning in higher education during the COVID-19 pandemic period". *Frontiers in Education*, 8. Available at: doi: 10.3389/feduc.2023.1334153
- Moore, C., and Greenland, S. (2017). Employment-driven online student attrition and the assessment policy divide: an Australian open-access higher education perspective. *J. Open Flex. Dist. Learn.* 21, 52–62. doi: 10.61468/jofdl.v21i1.286
- Naidu, S. (2017). Openness and flexibility are the norm, but what are the challenges? *Distance Educ.* 38, 1–4. doi: 10.1080/01587919.2017.1297185
- Newman, L. A., and Madaus, J. W. (2015). Reported accommodations and supports provided to secondary and postsecondary students with disabilities: National Perspective. *Career Dev. Transit. Except. Individ.* 38, 173–181. doi: 10.1177/2165143413518235
- Niemi, K. (2021). "The best guess for the future?" teachers' adaptation to open and flexible learning environments in Finland. *Educ. Inq.* 12, 282–300. doi: 10.1080/20004508.2020.1816371
- Normand, C., and Littlejohn, A. (2006) Flexible delivery: A model for analysis and implementation of flexible programme delivery. Quality Assurance Agency
- Okech, D., Barner, J., Segoshi, M., and Carney, M. (2014). MSW student experiences in online vs. face-to-face teaching formats? *Soc. Work. Educ.* 33, 121–134. doi: 10.1080/02615479.2012.738661
- Pacharn, P., Bay, D., and Felton, S. (2013). 'The impact of a flexible assessment system on students' motivation, performance and attitude'. *Acc. Educ.* 22, 147–167. doi: 10.1080/09639284.2013.765292
- Palmer, S. R. (2011). The lived experience of flexible education – theory, policy and practice. *J. Univ. Teach. Learn. Pract.* 8, 5–19. doi: 10.53761/1.8.3.2
- Pesen, A., and Oral, B. (2016). The effect of blended learning approach on academic success and motivation of teacher candidates. *Electr. J. Soc. Sci.* 15, 799–821. doi: 10.17755/esosder.85356
- Pincus, K. V., Stout, D. E., Sorensen, J. E., Stocks, K. D., and Lawson, R. A. (2017). Forces for change in higher education and implications for the accounting academy. *J. Account. Educ.* 40, 1–18. doi: 10.1016/j.jaccedu.2017.06.001
- Rideout, C. A. (2018). Students' choices and achievement in large undergraduate classes using a novel flexible assessment approach. *Assess. Eval. High. Educ.* 43, 68–78. doi: 10.1080/02602938.2017.1294144
- Roberts, T. (2002) 'Flexible learning: how can we get there from here?', in Australian Society for Computers in Learning in Tertiary Education (ASCILITE). Auckland, New Zealand, 8–11 December. Auckland: UNITEC Institute of Technology, pp. 553–560.
- Rouder, J., Saucier, O., Kinder, R., and Jans, M. (2021). What to do with all those open-ended responses? Data visualization techniques for survey researchers. *Surv. Pract.* 14, 1–9. doi: 10.29115/SP-2021-0008
- Schroeder, M., Makarenko, E., and Warren, K. (2019). Introducing a late Bank in Online Graduate Courses: the response of students. *Can. J. Scholarsh. Teach. Learn.* 10. doi: 10.5206/cjsotl-rcea.2019.2.8200
- Schunk, D. H., and Mullen, C. A. (2012). "Self-efficacy as an engaged learner" in S. L. Christenson, A. L. Reschly, and C. Wylie (Eds.), *Handbook of research on student engagement*. New York, NY, US: Springer Science + Business Media, pp. 219–235. Available at: doi: 10.1007/978-1-4614-2018-7_10
- Smith, A., Ling, P., and Hill, D. (2006). The adoption of multiple modes of delivery in Australian universities. *J. Univ. Teach. Learn. Pract.* 3, 4–19. doi: 10.53761/1.3.2.2
- Soffer, T., Kahan, T., and Nachmias, R. (2019). 'Patterns of Students' Utilization of Flexibility in Online Academic Courses and Their Relation to Course Achievement', *The International Review of Research in Open and Distributed Learning* 20, pp. 203–220. Available at: doi: 10.19173/irrodl.v20i4.3949
- Veletsianos, G., and Houlden, S. (2020). Radical flexibility and relationality as responses to education in times of crisis. *Postdigital Sci. Educ.* 2, 849–862. doi: 10.1007/s42438-020-00196-3
- Wang, P. (2011) 'Effects of Deadline Conditions on Learners of Different Procrastination Tendencies in an Online Course', *Electronic Theses and Dissertations [Preprint]*. Available at: <https://stars.library.ucf.edu/etd/6640> (Accessed: 20 October 2023).
- Wanner, T., and Palmer, E. (2015). Personalising learning: exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. *Comput. Educ.* 88, 354–369. doi: 10.1016/j.compedu.2015.07.008
- Warner, J. (2019) 'Deadlines in the "Real World"', *Inside Higher Ed*, 7 October. Available at: <https://www.insidehighered.com/blogs/just-visiting/deadlines-real-world> (Accessed: 13 September 2023).
- Wilson, J. H. (2008). Instructor attitudes toward students: job satisfaction and student outcomes. *Coll. Teach.* 56, 225–229. doi: 10.3200/CTCH.56.4.225-229
- Xavier, M., and Meneses, J. (2021). The tensions between student dropout and flexibility in learning design: the voices of professors in open online higher education. *Int. Rev. Res. Open Distrib. Learn.* 22, 72–88. doi: 10.19173/irrodl.v23i1.5652
- Zhang, Y., and Chen, X. (2023). 'Students' perceptions of online learning in the post-COVID era: a focused case from the universities of applied sciences in China'. *Sustain. For.* 15:946. doi: 10.3390/su15020946