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PREFERRED FORMS OF EDUCATION: IN-PERSON, HYBRID OR ONLINE, IN THE VIEW OF CHINESE TEACHERS AND STUDENTS – PILOT STUDIES

PREFEROWANE FORMY EDUKACJI: STACJONARNE, HYBRYDOWE LUB ONLINE, PRZEZ CHIŃSKICH NAUCZYCIELI I UCZNIÓW – BADANIA PILOTAŻOWE

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Słowa kluczowe: szkolnictwo wyższe, COVID-19, formy kształcenia: stacjonarne, internetowe, hybrydowe

Abstract

The study explores the perspectives of academic teachers and students in China regarding their preferred forms of education – in-person, hybrid or online – based on their experiences during the lockdown period. The research involved a sample size of 27 academic teachers and 210 higher education students. The study highlights the strengths and weaknesses of each form of education, providing valuable insights for educational institutions in China.

The findings of the study suggest that there is a lack of consideration for students' preferences when it comes to choosing the forms of education in many higher education institutions in China. This highlights the need for educational institutions to prioritize student feedback and preferences to optimize the learning experience.

The study sheds light on the challenges and opportunities presented by different forms of education and emphasizes the importance of adopting a more student-centred approach to education. The insights gained from this research could help guide educational institutions in China and beyond in making informed decisions about the education they offer, considering the preferences and needs of teachers and students.

Streszczenie

Badaniu poddano perspektywy nauczycieli akademickich i studentów w Chinach dotyczące preferowanych przez nich form edukacji – stacjonarnej, hybrydowej lub online – na podstawie ich doświadczeń z okresu izolacji. Wzięło w nim udział 27 nauczycieli akademickich i 210 studentów szkół wyższych. Badanie ukazuje mocne i słabe strony każdej formy edukacji, dostarczając cennych informacji instytucjom edukacyjnym w Chinach.

Wyniki sugerują, że w wielu szkołach wyższych w Chinach nie uwzględnia się preferencji studentów przy wyborze form kształcenia. Podkreśla to potrzebę, aby instytucje edukacyjne priorytetowo traktowały opinie i preferencje uczniów, aby zoptymalizować proces uczenia się.

Przeprowadzona analiza rzuca światło na wyzwania i możliwości, jakie stwarzają różne formy edukacji, i podkreśla znaczenie przyjęcia bardziej skoncentrowanego na studencie podejścia do edukacji. Przedstawione spostrzeżenia mogą pomóc instytucjom edukacyjnym w Chinach i poza nimi w podejmowaniu świadomych decyzji dotyczących oferowanej przez nie edukacji z uwzględnieniem preferencji i potrzeb nauczycieli i uczniów.

Introduction

The COVID-19 pandemic has had a significant impact on education around the world. To slow the spread of the virus, many schools and universities have closed or switched to remote learning. This has led to a shift towards online and virtual learning, with students and teachers having to adapt to new technologies and teaching methods¹.

The transition to remote learning has not been without challenges. The research shows some shortcomings but also provides suggestions for good academic practice². Some students and teachers have struggled with the lack of

¹ R.K. Bisht, S. Jasola, & I.P. Bisht (2020). Acceptability and challenges of online higher education in the era of COVID-19: A study of students' perspective. *Asian Education and Development Studies*. <https://doi.org/10.1108/AEDS-05-2020-0119>; L. Mishra, T. Gupta, & A. Shree (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012. <https://doi.org/10.1016/j.ijedro.2020.100012>; D. Mollenkopf, & M. Gaskill (2020). Creating meaningful learning experiences for preservice and in-service teachers facing interruptions in field experience placements during the COVID-19 pandemic. In R.E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field* (pp. 347–354): AACE-Association for the Advancement of Computing in Education. Retrieved June 15. <https://www.learntechlib.org/p/216903/>; N. Guppy, D. Verpoorten, D. Boud, L. Lin, J. Tai, & S. Bartolic (2022). The post-COVID-19 future of digital learning in higher education: Views from educators, students, and other professionals in six countries. *British Journal of Educational Technology*. <https://doi.org/10.1111/bjet.13212>; H. Heo, C.J. Bonk, M.Y. Doo (2022). Influences of depression, self-efficacy, and resource management on learning engagement in blended learning during COVID-19. *The Internet and Higher Education*, 54, 100856. <https://doi.org/10.1016/j.iheduc.2022.100856>

² J.K. Shin, & J. Borup (2020). Global webinars for English teachers worldwide during a pandemic: “They came right when I needed them the most”. In R.E. Ferdig, E. Baumgartner,

face-to-face interaction, while others have faced difficulties with access to technology or internet connectivity³. Both students and teachers experienced stress and even depression⁴. In addition, students from low-income or marginalized backgrounds may have had more difficulties accessing education⁵.

Despite these challenges, many teachers in many countries on all continents have been able to find creative solutions to continue providing quality education⁶. Teachers have used a variety of online tools and platforms to engage stu-

R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds), *Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field* (pp. 157–162). AACE-Association for the Advancement of Computing in Education. Retrieved June 15, 2020 from <https://www.learntechlib.org/p/216903/>; D. Piccolo, S. Tipton, & S.D. Livers (2020). Transitioning to Online Student Teaching. R.E. Ferdig, E. Baumgartner, R. Hartshorne, R. Kaplan-Rakowski, & C. Mouza (Eds.), *Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field* (pp. 297–302): AACE-Association for the Advancement of Computing in Education. Retrieved June 15, 2020. <https://www.learntechlib.org/p/216903/>

³ T. Moja (2021). National and institutional responses – reimaged operations – pandemic disruptions and academic continuity for a global university. *Studies in Higher Education*, 46(1), 19–29. <https://doi.org/10.1080/03075079.2020.1859688>; B. Yang, & Ch. Huang (2021). Turn crisis into opportunity in response to COVID-19: experience from a Chinese University and future prospects. *Studies in Higher Education*, 46(1), 121–132, <https://doi.org/10.1080/03075079.2020.1859687>; W. Bebbington (2021). Leadership strategies for a higher education sector in flux. *Studies in Higher Education*, 46(1), 158–165. <https://doi.org/10.1080/03075079.2020.1859686>; A. Lohr, M. Stadler, F. Schultz-Pernice, O. Chernikova, M. Sailer, F. Fischer, & M. Sailer (2021). On powerpointers, clickerers, and digital pros: Investigating the initiation of digital learning activities by teachers in higher education. *Computers in Human Behavior*, 119, 106715. <https://doi.org/10.1016/j.chb.2021.106715>

⁴ J. Jung, H. Horta, & G.A. Postiglione (2021). Living in uncertainty: the COVID-19 pandemic and higher education in Hong Kong. *Studies in Higher Education*, 46(1), 107–120. <https://doi.org/10.1080/03075079.2020.1859685>; S. Lischer, N. Safi, & C. Dickson (2021). Remote learning and students' mental health during the Covid-19 pandemic: A mixed-method enquiry. *Prospects*, 2021. <https://doi.org/10.1007/s11125-020-09530-w>;

⁵ A. Abdelhafez (2021). Digitizing Teacher Education and Professional Development during the COVID-19 Pandemic. *Academia Letters*, Article 295. <https://doi.org/10.20935/AL295>; T. Chen, L. Peng, X. Yin, J. Rong, J. Yang, & G. Cong (2020). Analysis of User Satisfaction with Online Education Platforms in China during the COVID-19 Pandemic. *Healthcare*, 8(3), 200. <https://doi.org/10.3390/healthcare8030200>; V. Chen, A. Sandford, M. LaGrone, K. Charbonneau, J. Kong, & S. Ragavaloo (2022). An exploration of instructors' and students' perspectives on remote delivery of courses during the COVID-19 pandemic. *British Journal of Educational Technology*, 53(3), 512–533. <https://doi.org/10.1111/bjet.13205>

⁶ R. Huang, D. Liu, A. Tlili, S. Knyazeva, T.W. Chang, X. Zhang, D. Burgos, M. Jemni, M. Zhang, R. Zhuang, & C. Holotescu (2020). *Guidance on Open Educational Practices during School Closures: Utilizing OER under COVID-19 Pandemic in line with UNESCO OER Recommendation*. Beijing: Smart Learning Institute of Beijing Normal University. https://iite.unesco.org/wp-content/uploads/2020/05/Guidance-on-Open-Educational-Practices-during-School-Closures-English-Version-V1_0.pdf; L. Marek, S. Polenta, & T. Warzocha (2021). Academic education during the Covid-19 pandemic – Polish and Italian experience. *Dyskursy Młodych Andragogów /*

dents and provide support, while students have had to learn how to be self-motivated and disciplined⁷.

The pandemic has also highlighted the need for education systems to be more flexible and adaptable in the future⁸. This includes investing in technology

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⁷ G. Marinoni, H. van't Land, & T. Jensen (2020a). The impact of Covid-19 on higher education around the world. *IAU global survey report*, 23. Paris: The International Association of Universities; G. Marinoni, H. van't Land, & T. Jensen (2020b). The Impact of Covid-19 on Higher Education. IAU International Higher Education, The Global Picture, No 102, Special ISSUE. <https://www.internationalhighereducation.net/api-v1/article/!/action/getPdfOfArticle/articleID/2915/productID/29/filename/article-id-2915.pdf>; S. Dhawan (2020). Online learning: A panacea in the time of COVID-19 crises. *Journal of Educational Technology*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>; E. Perzycka, & J. Janio (2021). How do higher education faculty adapt to the demands of online teaching? Reaction of higher education to COVID-19 in Poland and the United States—a snapshot. *Dyskursy Młodych Andragogów/Adult Education Discourses*, 22, 209–215. <https://doi.org/10.34768/dma.vi22.622>; A. Babicka-Wirkus, A. Cywiński, S.M. Joshua, & W. Walat (2021). Gaps in online education in the times of a pandemic in the opinion of Polish and Kenyan students. *Dyskursy Młodych Andragogów/Adult Education Discourses*, 22, 183–195. <https://doi.org/10.34768/dma.vi22.618>

⁸ G. Ifijeh, & F. Yusuf (2020). Covid-19 pandemic and the future of university system: The quest for libraries' relevance. *The Journal of Academic Librarianship*, 46(6), 102226. <https://doi.org/10.1016/j.acalib.2020.102226>; B. Yang, & Ch. Huang (2021). Turn crisis into opportunity in response to COVID-19: experience from a Chinese University and future prospects. *Studies in Higher Education*, 46(1), 121–132. <https://doi.org/10.1080/03075079.2020.1859687>; P. Paudel (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education (IJONSE)*, 3(2), 70–85. <https://doi.org/10.46328/IJONSE.32>; M.A. Peters, F. Rizvi, G. McCulloch, P. Gibbs, R. Gorur, M. Hong, Y. Hwang, L. Zipin, M. Brennan, S. Robertson, J. Quay, J. Malbon, D. Taglietti, R. Barnett, C. Wang, P. McLaren, R. Apple, M. Papastephanou, N. Burbules, L. Jackson, J. Pankaj, M. Kalantzis, B. Cope, A. Fataar, J. Conroy, G. Misiaszek, G. Biesta, P. Jandrić, S. Choo, M. Apple, L. Stone, R. Tierney, M. Tesar, T. Besley, & L. Misiaszek (2020). Reimagining the new pedagogical possibilities for universities postCovid-19. *Educational Philosophy and Theory*. <https://doi.org/10.1080/00131857.2020.1777655>; W.C. Birmingham, L.L. Wadsworth, J.H. Lassetter, J.H. Graff, E. Lauren, & M. Hung (2021). COVID-19 lockdown: Impact on college students' lives. *Journal of American College Health*, Published online 22 Jul. <https://doi.org/10.1080/07448481.2021.1909041>; van Schalkwyk, F. (2021). Reflections on the public university sector and the covid-19 pandemic in South Africa. *Studies in Higher Education*, 46(1), 44–58. <https://doi.org/10.1080/03075079.2020.1859682>; L. Zhang, R.A. Carter Jr, X. Qian, S. Yang, J. Rujimora, & S. Wen (2022). Academia's responses to crisis: A bibliometric analysis of literature on online learning in higher education during COVID-19. *British Journal of Educational Technology*, 53(3), 620–646. <https://doi.org/10.1111/bjet.13191>

and infrastructure to support remote learning, as well as providing professional development opportunities for educators⁹.

Taking into account both the positive and negative experiences¹⁰ of online classes, we ask the following question: What form of education would students and academic teachers in China prefer in the postpandemic world? Another question is what made them choose their respective forms of education, i.e., online, hybrid, or in-person? In this text, we present the answers and justifications for the preferences selected.

Methodology

The presented research results are a fragment of a broader study that spanned from 2021 to 2022 and was conducted in various places (Poland, Czech Republic, Slovakia, Vietnam, Kenya, and Norway). Due to this complexity, analysis, interpretation, and results were presented in separate articles. Research among academic teachers and students in China was conducted in the period of March – April 2022. The teachers were asked: Which form of work with students would you choose in the current academic year (the questionnaire was translated into Chinese and distributed on social media). The research included three differentiating variables: 1) gender, 2) place of residence, and 3) seniority.

⁹ H. Coates, Z. Xie, X. Hong (2021). Engaging transformed fundamentals to design global hybrid higher education. *Studies in Higher Education*, 46(1), 166–176. <https://doi.org/10.1080/03075079.2020.1859683>

¹⁰ L. Zhou, F. Li, S. Wu, & M. Zhou (2020). “School’s Out, However, But Class’s On”, The Largest Online Education in the World Today: Taking China’s Practical Exploration During The COVID-19 Epidemic Prevention and Control as An Example. *Best Evidence of Chinese Education*, vol. 4, no. 2, 501–519. <https://doi.org/10.15354/BECE.20.AR023>; O.T. Nguyen (2020). International students in Australia – during and after COVID-19. *Higher Education Research & Development*, 39(7), 1372–1376. <https://doi.org/10.1080/07294360.2020.1825346>; A. Oleksiyenko, G. Blanco, R. Hayhoe, L. Jackson, J. Lee, A. Metcalfe, M. Subramaniam, & Q. Zha (2020). Comparative and international higher education in a new key? Thoughts on the postpandemic prospects of scholarship. *Compare. A Journal of Comparative and International Education*, 1–17. <https://doi.org/10.1080/03057925.2020.1838121>; T. Muthuprasad, S. Aiswarya, K.S. Aditya, & G.K. Jha (2021). Students’ perception and preference for online education in India during COVID-19 pandemic. *Social Sciences & Humanities Open*, 3(1), 100101. <https://doi.org/10.1016/j.ssaho.2020.100101>; S.Z. Salas-Pilco, Y. Yang, & Z. Zhang (2022). Student engagement in online learning in Latin American higher education during the COVID-19 pandemic: A systematic review. *British Journal of Educational Technology*, 53(3), 593–619. <https://doi.org/10.1111/bjjet.13190>; O. Szwabowski, A. Cywiński, L. Marek, K. Łuszczek, E. Perzycka, M. Glinecka, W. Lib, W. Walat, T. Warzocha, & E. Baron-Polańczyk (2022). A Story by Academic Teachers About Distance Education in the Time of Lockdown. *Cultural Studies ↔ Critical Methodological*, First Publishes May 5. <https://doi.org/10.1177/15327086221094283>.

The questionnaire was distributed to students in April (2022), at which time some students were experiencing online learning at the dormitory. Because of the new outbreak of the Omicron variant, several universities cordoned off their campuses to protect their students and staff from the spread of the virus. This meant that students were not allowed to enter the university campus, and all classes were to be held online. The students were asked the main question: Which form of study would you choose in the coming academic year? and questions about differentiating variables. Students were asked approximately 1) gender, 2) place of residence, 3) form of studies, 4) year of study, and 5) sources of financing.

Statistical methods were used to analyse quantitative data. A data matrix was created for the analysis of qualitative data¹¹. Coding, meaning condensation, and meaning interpretations were performed in the order described above. On this basis, bricolage was created. The analysis of the statements made by teachers and students focused on separate threads and categories that constitute a common denominator and on establishing a separate category of threads specific to a single statement (opinion).

Background of the research

Analysis of the teachers' responses

The general distribution of teachers' responses in China indicated a preference for the in-person form (42.31%, 11), hybrid form (50%, 13) and online form (7.69%, 2).

The differentiating variables of the questionnaire are presented in the following tables.

Analysis of the student's response

The students were asked about which form of studying they would choose in the current academic year. The research included five differentiating variables: 1) gender, 2) place of residence, 3) seniority, 4) study type (full-time and extra-mural), and 5) income.

The general distribution of students' responses in China indicated a preference for the online form (49.52%, 104) and hybrid form (30.65%, 65). The smallest number of students in the research chose the offline form – 19.52% (41).

The differentiating variables of the questionnaire are presented in the following tables.

¹¹ K. Almendingen, M.S. Morseth, E. Gjølstad, A. Brevik, & C. Tørris (2021). Student's experiences with online teaching following COVID-19 lockdown: A mixed methods explorative study. *PLoS ONE* 16(8): e0250378. <https://doi.org/10.1371/journal.pone.0250378>

1. Gender variable

Teachers

The research included 14 women and 22 men. Among female participants, 50% (7) chose the in-person form, 50% (7) chose the hybrid form, and no one chose the online form. Among male participants, 33.33% (4) chose the in-person form, 50% (6) chose the hybrid form and 16.67% (2) chose the online form.

Table 1. The function of the gender of teachers (distribution of the number according to numerical and percentage values).

Gender	Form of education – Teachers							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
Female	14	53.85	7	50	7	50	0	0
Male	12	46.15	4	33.33	6	50	2	16.67
Total	26	100	11	42.31	13	50	2	7.69

Source: Own study

Students

The research included 110 women and 99 men; one person did not provide gender information. Among female participants, 54.55% (60) chose the online form, 27.27% (30) chose the hybrid form, and 18.18% (20) chose the in-person form. Among male participants, 43.43% (43) chose the online form, 35.35% (35) chose the hybrid form, and 21.21% (21) chose the in-person form.

Table 2. The function of the gender of students (distribution of the number according to numerical and percentage values).

Gender	Form of education – Students							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
Female	110	52.38	20	18.18	30	27.27	60	54.55
Male	99	47.14	21	21.21	35	35.35	43	43.43
No data	1	0.48	0	0	1	100	0	0
Total	210	100	41	19.52	66	31.43	103	49.05

Source: Own study

Conclusions

Approximately 50% of students are in favour of online forms. There is the same percentage of teachers (50%) who are in favour of the hybrid form. Regardless of gender, hybrid education is the second most popular choice among students. Female students are more likely to prefer the online form, while male students are more likely to prefer the hybrid form. Regardless of gender, in-person education was the second most popular choice among teachers.

Female teachers are more likely to prefer the in-person form. A total of 16.67% of male teachers chose online forms, while no female teachers chose online forms.

2. Place of residence variable

Teachers

In regard to Do you currently live in the city where your university is based? there were 92.31% (24) participants who chose “Yes”, and only 7.69% (2) chose “No”.

Among teachers living in the city where the university is located, 45.83% (11) chose the in-person form, 50% (12) chose the hybrid form, and 4.17% (1) preferred online classes. Among people who do not live in the city where the university is located, no one chose in-person form, 50% (1) chose hybrid, and 50% (1) are in favour of online teaching.

Table 3. The function of the place of residence of teachers (distribution of the number according to numerical and percentage values).

University headquarters	Form of education – Teachers							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
In place of residence	24	92.31	11	45.83	12	50	1	4.71
Not in place of residence	2	7.69	0	0	1	50	1	50

Source: Own study

Students

When asked: Do you currently live in the city where your university is based?, 53.33% (112) of participants chose “yes”, while 46.67% (98) indicated “no”.

Among students living in the city where the university is located, 19.64% (22) chose the in-person form, 31.25% (35) chose the hybrid form, and 49.11% (55) preferred online classes. Among people who do not live in the city where the university is located, 19.39% (19) chose in-person form, 30.61% (30) chose hybrid, and 50% (49) are in favour of online.

Table 5. The function of the place of residence of students (distribution of the number according to numerical and percentage values).

University headquarters	Form of education – Students							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
In place of residence	112	53.33	22	19.64	35	31.25	55	49.11
Not in place of residence	98	46.67	19	19.39	30	30.61	49	50

Source: Own study

Conclusions

The main reason for 98 students being out of campus is that they could not enter it at the beginning of the semester. Regardless of the location, approximately 50% of teachers and students are in favour of online forms. The choice of an in-person form is related to the location, and teachers who live in the city where the university is located are more likely to choose the in-person form. The influence of the location of students is not apparent in the choice of education form. Whether living in the city where the university is based or not, the hybrid form is the first choice for teachers, and for students, the hybrid form is the second choice.

3. Seniority variable

Teachers were asked about “How many years have you been working?” 1–5 years – 34.62% (9), 6–10 years – 23.08% (6), 11–20 years – 11.54% (3), 21–30 years – 26.92% (7), more than 31 years – 3.85% (1).

Table 6. Form of education as a function of teachers’ years of service/seniority (distribution of the number according to numerical and percentage values).

Seniority	Form of education – Teachers							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
1–5 years	9	34.62	2	22.22	5	55.56	2	22.22
6–10 years	6	23.08	0	0	6	100	0	0
11–20 years	3	11.54	2	66.67	1	33.33	0	0
21–30 years	7	26.92	6	85.71	1	14.29	0	0
over 31	1	3.85	1	100	0	0	0	0

Source: Own study

Conclusion

In general, online education was not popular among teachers. Taking the years of working into consideration, teachers who worked for more than 20 years have a tendency to prefer in-person education. Hybrid education was the first choice for younger teachers. (1–10 years).

4. The year of the study variable

Students were asked about their years in the university (most BA majors are four years in China, and some special majors, such as medicine, are five years). A total of 10.48% (22) chose the first year, 30.48% (64) chose the second year of study, 23.23% (49) chose the third year, 21.43% (45) chose the fourth year of study, 8.1% (17) were in the fifth year of study, only 2.86% (6) were in the sixth year, and 3.33% (7) were classified as others (students who chose more than four years because of the delay of graduation).

Table 7. Form of education as a function of the students' year of study (distribution of the number according to numerical and percentage values).

Seniority	Form of education – Students							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
first year	22	10.48	7	31.82	7	31.82	8	36.36
second year	64	30.48	15	23.44	18	28.13	31	48.44
third year	49	23.33	8	16.33	19	38.78	22	44.9
fourth year	45	21.43	5	11.11	10	22.22	30	66.67
Fifth year	17	8.1	2	11.76	6	35.29	9	52.94
Sixth year	6	2.86	3	50	1	16.67	2	32.33
Other	7	3.33	1	14.9	4	57.4	2	28.7

Source: Own study

Conclusions

Taking the school year into consideration, freshmen and sixth-year students preferred to take classes in person. Students in the fourth and fifth years are more in favour of online studying. (They do not have that many courses, the main task is preparing their thesis for graduation). Students in the other years are apparently attracted to hybrid education. It seems that the choice is related to the school year; younger students are more likely to choose in-person and hybrid forms, while students in higher grades prefer online education. The percentage of full-time students choosing the online form is higher than that of extramural students. Full-time students and extramural students both chose hybrid as the second most popular option.

5. Study type variable

There were 70.48% (148) full-time students and 29.52% (62) extramural students. Among full-time students, 15.54% (23) chose the in-person form, 29.73% (44) responded hybrid, and 54.73% (81) chose online. Among extramural students, 29.03% (18) chose in-person, 33.87% (21) indicated hybrid, and 37.1% (23) chose online.

Table 8. Form of education in the function of the students' form of studies (distribution of the number according to numerical and percentage values).

Studying type	Form of education – Students							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
Full time	148	70.48	23	15.54	44	29.73	81	54.73
Extramural	62	29.52	18	29.03	21	33.87	23	37.1

Source: Own study

Conclusions

The percentage of full-time students choosing online forms is higher than that of extramural students. Full-time and extramural students chose hybrid as the second most popular option.

6. Income variable

Concerning the source of income, 27.14% (57) responded that they supported themselves by working, 32.38% (68) indicated that they were dependent on their parents, 32.86% (69) reflected that they supported themselves by working and help from parents, and 7.62% (16) had another source of income.

Table 9. Income variable in the function of the students' form of studies (distribution of the number according to numerical and percentage values).

Income	Form of education – Students							
	N		FS		FH		FO	
	N	%	N	%	N	%	N	%
Support themselves	57	27.14	11	19.3	19	33.33	7	47.37
Dependent on parents	68	32.38	17	25	21	30.88	30	44.12
Working and help from parents	69	32.86	9	13.04	22	31.88	38	55.07
Another source	16	7.62	4	25	3	18.75	9	56.25

Source: Own study

Conclusions

Considering the income source, students who support themselves by working with help from parents and students with another source of income are more likely to choose the online form of education. Students dependent on their parents are less likely to choose online education when compared to other students needing to support themselves or receive funding from other sources. There is a relation between the choice of education form and the source of income.

Justification for the choice of form of study

In-person education is considered the most traditional form of education and has been the main mode of tutoring for many centuries. In-person education allows for hands-on learning experiences such as laboratory work, field trips, and group projects that can be difficult to replicate online.

Online education, also known as e-learning or distance learning, is a form of education where students receive tutoring and engage in learning activities primarily through the Internet. This can include synchronous, where students and teachers interact in realtime, or asynchronous, where

students complete coursework on their own schedule¹². Online education can take many forms, such as virtual classrooms, webinars, video lectures, and self-paced coursework.

Hybrid education, also known as blended learning, is a form of education that combines both in-person and online instruction. In a hybrid education model, students attend some classes in a physical classroom setting and participate in online learning activities. Hybrid education aims to take advantage of the strengths of in-person and online instruction to provide a more flexible and personalized learning experience for students.

Students	Teachers
In-person education	
<p>The justification for choosing the in-person education form was explained as follows. First, in-person education is necessary for some special majors that need to do experiments and research in the laboratory. Second, students emphasized the offline form enables direct interaction between teachers and students, which is beneficial to the creation of good learning and teaching atmosphere. Third, students who are in favour of in-person education criticized the quality of online classes, which are not as good as in-person. Another important point of supporting in-person education is that students prefer enjoying university life on campus and joining in the activities. There are more than 30 participants who said that they wanted to get a real university experience.</p>	<p>When explaining why they chose this form of in-person education, teachers' justifications were as follows. First, teachers hold the opinion that the in-person form is beneficial for the interaction between teachers and students. The second reason for choosing in-person is that students are more focused on the class in face-to-face education. Third, in-person form is more realistic than online education and it is easier to start a discussion. In-person education allows students to interact with their peers and develop social skills, which is an important aspect of their overall development. In-person education allows teachers to monitor students' progress and provide immediate feedback, which can improve learning outcomes.</p>
Online education	
<p>The reason for students choosing this online form of education is mostly based on safety. The online form can reduce the infection rate of the virus. There are approximately 70 students who wrote time saving and effective as the reason for choosing online education. Teachers and students do not need to go to the campus, they can teach and learn at any time and anywhere. In addition to another important reason is the spread of the virus, there are approximately 50 students who think it is safe and convenient to</p>	<p>There are only 16.72% teachers who chose online form. Teachers said that it is safe and time saving during COVID-19 period. The biggest advantage for online education is that it overcomes the distance problem, the online education can be carried out anywhere and anytime. Online education provides students with access to online resources and technologies that can enhance their learning experiences, such as online simulations, virtual lab activities, and interactive multimedia. Online education allows students to</p>

¹² T. Agasisti, & M. Soncin (2021). Higher education in troubled times: on the impact of Covid-19 in Italy. *Studies in Higher Education*, 46(1), 86–95. <https://doi.org/10.1080/03075079.2020.1859689>.

<p>transfer to online teaching form during the COVID-19 period.</p>	<p>learn at their own pace and on their own schedule, making it a good option for students with busy schedules or other commitments. Increased access to education: Online education can make education more accessible to students who live in remote areas, have mobility issues, or have other barriers to in-person instruction. Online education can lack the personal interaction and socialization that in-person instruction provides. Online education may not be able to provide the same level of hands-on or laboratory-based instruction as in-person classes. Online education requires students to be self-motivated and disciplined to stay on track with their coursework which can be difficult for some students. Online education is not a one-size-fits-all solution, it may not be appropriate for all students or programs.</p>
<p>Hybrid education</p>	
<p>Hybrid education comes with modern educational technology, which can provide a good platform for teachers and students. It not only makes up for traditional teaching but also provides flexibility in the time and place for students to learn. The combination of offline and online forms makes students more dynamic rather than passive recipients. Students who've chosen hybrid form hold the opinion that it is convenient for lectures or speeches and some special classes, such as problem-solving or experiments, need an in-person gathering. The hybrid form also provided teachers and students with a platform for after-class discussion and communication. Blended education is more personalized. With the usage of hybrid form, teachers can communicate with students more often and understand the learning situation of students. Students can receive feedback from teachers about their learning in a timely manner.</p>	<p>The combination of in-person and online is effective and convenient. The combination of in-person and online can improve the quality and efficiency of teaching and learning. The hybrid form is much easier to teach students according to their aptitude. The classes are more dynamic that speeches or lectures can be conducted online while some difficult problems can be discussed in-person. Hybrid education allows students to attend classes in-person and online, which can be more convenient and flexible for some students. This can be especially useful for students with work or family obligations that make it difficult to attend classes in-person on a regular basis.</p>

Source: Own study

Discussion

The choice of the form of studying, whether in person, online, or a blend of both, depends on various factors and can vary from one institution or program to

another. According to teachers from China who chose an in-person form of education as their priority, this form of studying should dominate because it breaks communication barriers and makes personalized consultations possible, especially for people taking up employment. It gives more opportunities for nonverbal communication, and chatting is great for shy students. In this way, their need for individual treatment is satisfied. Some of the main considerations for choosing the form of studying include 1) interaction: During the pandemic, the concentration on the class and realistic teachers and staff is a top priority. In-person classes may be suspended or limited to comply with social distancing guidelines, while online or remote learning can be implemented as an alternative. 2) Access to technology and internet connectivity: Online or remote learning requires students to access reliable technology and internet connectivity. This may be a barrier for some students, particularly those from low-income or marginalized backgrounds. 3) Pedagogical considerations: Different forms of teaching can be more or less effective depending on the subject matter and the learning goals. For example, hands-on or laboratory-based classes may not be able to be replicated in an online format. 4) Student preferences and needs: Some students prefer in-person instruction, while others prefer online or remote learning. It is important to consider students' diverse needs and preferences when making a decision. 5) Resources and logistics: In-person classes may require more resources and logistics than online or remote learning. Institutions need to consider their available resources and logistics when choosing the form of studying.

Ultimately, the choice of the form of studying will depend on the specific context and the needs of the institution, students, and teachers. A hybrid approach that combines both in-person and online tutoring may be the best solution to provide flexibility and balance the different considerations.

When considering the choice of form of studying, it is important to consider all of these factors and how they may be impacted by choice of in-person, hybrid, or online education. While online education has benefits, it is important to ensure students have access to the resources and support they need to succeed. Another important thing is to ensure that the university has a system to monitor and supervise students' academic progress.

Face-to-face interaction, hands-on learning, socialization, access to resources, and monitoring and supervision are all important factors in the education process and are particularly important in higher education. Monitoring and supervision also play an important role in ensuring students' academic progress, providing feedback and guidance, and ensuring they meet academic standards.

Convenience and flexibility are some of the main advantages of online education, as students can study at their own pace, from anywhere, and at any time. This is especially beneficial for students who have busy schedules, those with

family responsibilities, or those who live in remote areas. Online education increases access to education for students who may not have been able to pursue higher education through traditional in-person methods. This includes students from marginalized backgrounds, those with disabilities, and those living in remote areas.

In hybrid or in-person education, there are several pedagogical considerations that teachers and students pay attention to in China. Hybrid education offers a flexible approach that combines the best aspects of online and in-person education with benefits such as personalization, access to technology, increased engagement, and cost-effectiveness. It is a viable option for many students, particularly those looking for a balance between online and in-person instruction. However, it is important to keep in mind that hybrid education may not be the best fit for all students and to consider the specific needs and goals of each student.

Conclusion

The COVID-19 pandemic has accelerated the shift towards digital and remote learning. It has shown that education systems need to be more adaptable to change to continue providing quality education to students. This includes investing in technology and infrastructure to support remote learning and providing professional development opportunities for teachers to use these tools and adapt to new teaching methods effectively.

Additionally, the pandemic has highlighted the importance of having a robust remote learning plan in place and ensuring that all students have access to the necessary technology and internet connectivity to participate in remote learning. It also highlighted that not all students have the same resources or support at home. Education systems must address these disparities to ensure that all students have equal opportunities to access and benefit from education.

In the future, education systems must be more flexible and responsive to disruptions caused by pandemics or other unforeseen events. This includes quickly pivoting to alternative forms of teaching, such as online or blended learning, and providing support for students, teachers, and families during these difficult times.

Assessment and feedback are important components of tutoring, providing teachers with information on student learning and students with information on their progress. These strategies should be aligned with the learning objectives and consistent across all education forms. Active learning strategies, such as group work, discussion, and problem-based learning, can effec-

tively engage students and promote deeper learning in both in-person and online education.

A teacher's limited contact with students is often caused by the lack of availability of equipment or unstable Internet connections, as shown by many researchers¹³, and announcements of academic staff layoffs¹⁴. Personalization of teaching, such as providing students with choice, autonomy, and opportunities to learn at their own pace, can effectively promote student engagement and motivation in both in-person¹⁵ and online education. Incorporating technology, such as digital tools, multimedia resources, and online platforms, can effectively enhance the learning experience and provide students with access to a wide range of resources in both in-person and online education.

Hybrid education can be more cost-effective than traditional in-person tutoring because it utilizes technology and online resources to lower costs associated

¹³ E.J. Sintema (2020, April 7). Effect of COVID-19 on the performance of grade 12 students: Implications for STEM education. *EURASIA Journal of Mathematics, Science and Technology Education*, 16(7). <https://doi.org/10.29333/ejmste/7893>; F. van Schalkwyk (2021). Reflections on the public university sector and the covid-19 pandemic in South Africa. *Studies in Higher Education*, 46(1), 44–58. <https://doi.org/10.1080/03075079.2020.1859682>; W. Tamrat (2021). Enduring the impacts of COVID-19: experiences of the private higher education sector in Ethiopia. *Studies in Higher Education*, 46(1), 59–74. <https://doi.org/10.1080/03075079.2020.1859690>; K.R. Lagi (2020). COVID19 – resilient education in the islands. *Higher Education Research & Development*, 39(7), 1367–1371. <https://doi.org/10.1080/07294360.2020.1825347>; P. Hiep-Hung, & H. Thien-Thi-Hanh (2020). Toward a 'new normal' with e-learning in Vietnamese higher education during the post COVID-19 pandemic. *Higher Education Research & Development*, 39(7), 1327–1331. <https://doi.org/10.1080/07294360.2020.1823945>; J. Blackmore (2020). The carelessness of entrepreneurial universities in a world risk society: a feminist reflection on the impact of COVID 19 in Australia. *Higher Education Research & Development*, 39(7), 1332–1336. <https://doi.org/10.1080/07294360.2020.1825348>; A. Mupenzi, W. Mude, & S. Baker (2020). Reflections on COVID-19 and impacts on equitable participation: the case of culturally and linguistically diverse migrant and/or refugee (CALDM/R) students in Australian higher education. *Higher Education Research & Development*, 39(7), 1337–1341. <https://doi.org/10.1080/07294360.2020.1824991>; O.T. Nguyen (2020). International students in Australia – during and after COVID-19. *Higher Education Research & Development*, 39(7), 1372–1376. <https://doi.org/10.1080/07294360.2020.1825346>; M. Babbar, & T. Gupta (2021). Response of educational institutions to COVID-19 pandemic: An intercountry comparison. *Policy Futures in Education*. <https://doi.org/10.1177/14782103211021937>; W. Bao (2020). COVID-19 and online teaching in higher education: A case study of Peking University. *Human Behavior & Emerging Technologies*, 2, 113–115. <https://doi.org/10.1002/hbe2.191>.

¹⁴ H. Coates, Z. Xie, X. Hong (2021). Engaging transformed fundamentals to design global hybrid higher education. *Studies in Higher Education*, 46(1), 166–176. <https://doi.org/10.1080/03075079.2020.1859683>.

¹⁵ M. Daumiller, R. Rinas, J. Hein, S. Janke, O. Dickhäuser, & M. Dresel (2021). Shifting from face-to-face to online teaching during COVID-19: The role of university faculty achievement goals for attitudes towards this sudden change, and their relevance for burnout/engagement and student evaluations of teaching quality. *Computers in Human Behavior*, 118, 106677. <https://doi.org/10.1016/j.chb.2020.106677>.

with physical infrastructure and logistics. However, as with any form of education, there are also some challenges to hybrid education, such as providing equal access to technology resources and ensuring that online schooling¹⁶ is of equal quality as in-person schooling. Additionally, it may require more planning and coordination from teachers and institutions to ensure that in-person and online schooling are aligned and complementary and to encourage the use of digital education tools.

The pandemic has also highlighted the importance of student support services, such as counselling, academic advising, and career services. The post-pandemic future of digital learning in higher education will likely be characterized by a continued emphasis on flexibility, technology integration, student support services, and accessibility. Universities and colleges will have to be responsive to the changing needs of students and adapt their digital learning strategies accordingly.

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