



DISTANCE LEARNING: MINDSET, MOTIVATION, AND ADAPTATION IN THE COVID ERA

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Abstract:

The year 2020 saw a large and rapid COVID-related transition to distance learning, including in countries and institutions that have traditionally been averse to non-traditional instruction delivery options. The effects of this shift have been evaluated in numerous papers; however, most have addressed changes in the educational operation and mindset of students in the developed world. This article examines the self-reported performance and satisfaction of two cohorts of college students in China, the first (Cohort I) recruited from two of the researcher's courses—Educational Research and Issues in Bicultural Education—both taught at Jilin International Studies University, and consisting of a total of 105 participants out of a possible 137 (76.64% response rate). The second cohort (Cohort II) consisted of 28 participants from higher educational institutions throughout China, collected by way of the snowball sampling method with the assistance of one of the researcher's students. Participants were given a multi-construct electronic survey of 30 questions. They then submitted these completed surveys as DOCX files by email or by the Tencent WeChat messenger program. These results were compiled and analyzed in Microsoft Excel, using simple statistical methods and percentages. Results for each cohort differed markedly, with considerable overlap of key constructs. Students in Cohort I demonstrated considerably higher levels of satisfaction with distance education and their physically isolated living and study conditions than did those in Cohort II; however, both groups reported generally positive or neutral experiences in distance learning both in absolute terms and relative to their in-person learning experiences. Possible reasons for the differences in these responses and the suggestions for expanding and improving distance learning in China are presented herein.

Keywords: China, distance education, student satisfaction, higher education, student wellbeing

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1. Introduction

In 2020, distance education experienced a sudden and unparalleled growth as a result of COVID control measures (Li & Lalani, 2020). The effects of the sudden changeover from in-person to distance education have been the subject of considerable debate and research; however, effects particular to traditional-age college students (18-23) in China have been less thoroughly examined.

Additionally, research into the effectiveness of distance learning relative to in-person instruction has yielded contradictory results, with some studies suggesting that online learning yields inferior learning and comprehension (Figlio et al., 2010; Alpert et al., 2016; Cellini & Grueso, 2021) and others suggesting that online learning is either equivalent or superior to in-class instruction (Ni, 2013). Finally, some make a critical distinction between emergency remote learning and ordinary online/distance learning (Hodges et al., 2020).

For this study, no such remote/emergency versus planned online learning distinction was made. While this distinction might have been relevant in 2020, it is likely no longer relevant to the research at hand, which was conducted in December of 2021, after teachers and institutions had more than a year to adapt to the unique requirements of online instruction. Said another way, if the distance/remote learning investigated herein is the product of an emergency, said emergency is either a permanent one or one of such long duration that it has ceased to be an emergency in anything but name.

There is no single method to compare pre-/post-COVID distance learning experiences. One could analyze grade differences, but this is potentially problematic at the college level, where assessments are often at least partially subjective, and students and teachers alike may have gradually adjusted their expectations, learning, and evaluation methods over more than one year. Standardized assessments (professional licensure examinations; college, graduate, or professional school entrance examination, etc.) might yield more meaningful results; however, even they have been subject to differences in administration and grading policies over the past 18 months.

Even were many years of perfectly calibrated grades and standardized assessment results available for review, an analysis of them would omit potentially critical information on learner mindset and wellbeing. The education of students matters, no doubt, but so does their ability to maintain their physical and mental health when functioning in a learning environment that may be singularly alien to them—with this alienness largely being a product of the relative hesitancy of educational institutions in non-Western countries to acclimatize to non-traditional modes of instruction before the pandemic (Dhawan, 2020).

This article examines self-reported student mindset, levels of physical and mental wellbeing, levels of satisfaction with distance learning (both independently of and relative to student in-person educational experience), and student desire to either continue distance learning or return to conventional instructional delivery methods. That performance on these dimensions might not be immediately evident on conventional assessments of student achievement makes them no less worthy of investigation,

especially in light of the potential for remote learning/online learning to be the dominant modality of instruction for some time to come.

The goal of this research is to measure the success students have had in adapting to a singular moment in human history, one in which direct, face-to-face interaction with human beings has been restricted to the greatest amount practical with current technology. Thus, this study is less one of purely academic performance than it is of resilience or grit, the *“perseverance and passion for long-term goals . . . [and] entails working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress,”* (Duckworth et al, 2007, pp. 1087-1088) within the context of a novel educational, cultural, and social environment.

It is with this in mind, that this article proceeds to descriptions of the materials and methods used in the research.

2. Literature Review

The 2020 and 2021 move to distance learning was global and without precedent. More than 1.6 billion students in more than 150 countries were affected by this sudden reconfiguration of the educational system, one which placed tremendous demands on educators, technologists, and students (Muñoz-Najar et al., 2021). Results of this nearly instantaneous occurrence reportedly varied. Before one can consider the present research, one must consider the three distinct areas of potential difficulty identified in the existing research: 1) the overall effectiveness of remote learning relative to in-person learning; 2) the history and effectiveness and efficiency of the rapid transition from in-person to distance learning; and 3) the psychological impact of social distancing and isolation, particularly within the academic setting.

2.1 Background and Effectiveness of Remote Learning

Remote learning (or *distance learning*) is not new. Anderson and Simpson (2012) divide distance learning systems and approaches into four generations. The first generation was defined by print media and correspondence education. The second, by television and broadcast instruction. The third, by computer conferencing and teleconferencing (often using dedicated satellite channels or remote-instructional laboratories). The fourth generation—the present generation—is defined by computer-mediated instruction, flexibility of content delivery, and the potential for direct interaction with students through technologies readily available to them (tablet computers, smartphones, etc.), with greater opportunities for customized and personalized instruction.

Each of these stages of development posed problems of adaptation for institutions, teachers, and students.

Traditionally, correspondence education served as a stopgap measure—providing education for working adults and those too far removed from urban conditions and densely populated areas to be able to easily attend conventional classrooms. One such stopgap correspondence program was the Elementary Correspondence School (ECS) of British Columbia, Canada, which provided remote instruction to young students in a

province defined by a low population density and sometimes treacherous travel conditions. Gleason (2017) describes both the nature of this instruction—provided by a provincial board to some of Canada’s most remote students—and the obstacles faced by students and their families. Aside from the obvious difficulties of learning without the physical presence of a teacher and the necessarily long wait times between assignment submission by post and assignment feedback (also by post), early correspondence programs suffered from a crisis of credibility. Active throughout the early 20th century, ECS was a decidedly first-generation distance learning institution. Yet despite the limitations of correspondence schooling of the 1920s and 1930s, students and parents demonstrated considerable enthusiasm for this approach to education, often writing for additional supplies, instructional material, and guidance, so that they could learn without being impeded by the sometimes-significant delays in communication.

Second-distance learning emerged in the broadcast era, with China’s Radio and Television Universities (RTVUs) being one such example. Zhang and Li (2019) describe the founding and growth of these institutions in considerable detail. Founded in the 1960s and 1970s, these schools were designed to provide education to workers and adults who would not otherwise have had access to education. After a period of disruption, these schools began to take their modern form, largely patterned after Britain’s Open University. The present system was developed in three stages. The first stage (1979 to 1989) focused on the education of adults, particularly workers and government officials who had seen their educations disrupted by the school closures of the 1960s and 1970s. The second stage (1990 to 1998) addressed adult education and general college education through television programs recorded by university professors. The third stage (1999 to 2010) was a period of consolidation of administration and the expansion into online learning options, with particular emphasis placed on programs for farmers, the disabled, and those in the military. The final iteration of China’s RTVUs came in 2010, when they were formally restructured and renamed as open universities, with online learning their primary mode of instruction. It is through this final iteration that Chinese distance educational went from being a complement to the existing university structure to a full-fledged education system in its own right. Thus, the Chinese RTVU/open university model evolved from a second-, to a third-, to a fourth-generation system within about 60 years.

While this transformation is commendable and impressive, it had little effect on the structure of the larger Chinese university ecosystem, which has adhered to the in-person instructional model.

With each improvement in technology and content delivery, distance learning has moved incrementally from also-ran to viable alternative to conventional instruction. And educational outcomes have improved over time.

Liu and Yen (2014) examined the effectiveness of distance learning in a Department of Public Administration program at an unnamed university. Their study, much like this one, relied upon self-reported levels of learning and performance, comparing the quality of distance learning and conventional learning. Their research determined that distance learning performed favorably against in-person instruction.

Phipps and Merisotis (1999) found that distance education can be effective, but only for certain people in certain circumstances. Students most likely to persist and excel in a distance learning environment generally shared several traits. The ones most relevant to the present study were:

- 1) Persistence;
- 2) Seeing the consequences of failure as being severe;
- 3) Not needing support;
- 4) Being highly literate;
- 5) Being organized;
- 6) Being female.

It is important to keep in mind that the above research is more than 20 years old. In the time since it was conducted, technology, student familiarity with technology, and the public's willingness to engage in communication remotely (such as by way of social media) have changed. Nevertheless, at least some of these traits are likely to influence distance learning performance at present.

2.2 Overnight Change: From In-person to Online Learning

All of the previous examples and research on distance education were based on teaching and learning models and systems developed over time. The considered institutions had years (if not decades) to adapt to remote learning. Teachers either gradually accumulated distance-teaching practice or were prepared by way of training or guidance. And students began their distance-learning experience knowing full well that they would not be learning by way of the conventional methods.

The great 2020 remote learning experience was singularly different.

Students and teachers who had little, if any, expertise in technology-mediated instruction sometimes found themselves immersed in it in a matter of days.

The effectiveness with which institutions adjusted to this change was not uniform. Garad et al. (2021) found that schools with a more robust e-learning infrastructure and teachers and students more familiar with e-learning systems fared considerably better than those in which little or no existing infrastructure existed and in which students and teachers had little or no experience with distance learning.

Zheng et al. (2021) found that United States dentistry students were generally satisfied with the quality of online instruction they received during the pandemic. They also found that students appeared to score about as well or better on measures of content mastery as did a control group from 2019, which took in-person classes. Finally, a clear majority (80%) of students indicated that they wished to take at least some classes online, even after pandemic restrictions are lifted.

Results for younger students and those with more limited access to and familiarity with technology appear more mixed. Schaeffer (2021) found that 30% of United States parents of school-age children engaged in distance learning during the pandemic reported difficulty when attempting to help their children use the internet or other distance-learning tools. Those who reported the greatest degree of difficulty were often lower-income, rural, and female. The last point—that mothers appeared to have more

difficulty using distance-learning technology than fathers—suggests that Phipps and Merisotis (1999) successful distance-learning correlates (with female learners faring better than male ones) may require revision or be subject to complex factors that have been heretofore unexamined.

2.3 Psychological Impact of Social Distancing and Isolation

Early in the pandemic, Clemens et al. (2020) argued that social distancing and social isolation would stand to have significant and deleterious effects on the mental health of children and adolescents. This was a preliminary assertion, grounded in professional experience and reasoning, but that is not to say that it necessarily proved true.

Pieh et al. (2021) compared the results of mass student mental health assessments in Austria taken in 2018 to those of assessments taken in 2021. Adolescents were found to be suffering significantly more from mental health problems, including eating disorders and suicidal ideation, in the latter assessment. This suggests that social distancing has negatively affected the mental health of Austrian adolescents; however, it does not establish this as a settled fact. The researchers also concluded that students with access to smartphones had poorer mental health than those without. The increased prevalence of smartphones in 2021 relative to 2018 may be partially to blame for these problems, which is not to say that social distancing has not also played a part in this decline. Truzoli et al. (2021) examined the mental health of Italian high school students who had been assigned online classes due to COVID. They found that most students were satisfied with their distance learning experience; however, at least 25% of students reported anxiety or depression. No significant difference was found in the levels of anxiety, depression, or stress levels reported by male and female participants, with the greatest determinants of success found to be high self-efficacy and an internal locus of control.

It should be stressed that the aforementioned research focused on students at least somewhat younger than those evaluated in the present study.

Lee et al. (2021) investigated the mental health of college students in the United States during the pandemic and found that many of the problems they faced mirrored those reported for high school students, with 88% of college students reporting moderate to severe stress levels, 44% reporting anxiety, and 36% reporting moderate to severe depression. They also observed that low-income, rural, female students fared worse than any other demographic. This confirms the findings of Schaeffer (2021).

The existing research provides some interesting insight; however, it is neither entirely consistent nor is it entirely applicable to the present research group—traditional-aged Chinese college students.

3. Material and Methods

This study is multidimensional and analytical in that it attempts to evaluate several dimensions of wellbeing, resilience, adaptability, and preference.

Two groups of participants were assessed by way of an electronically delivered survey of 30 questions. The survey was prepared in the form of an electronic document (DOCX file), which was sent to students by way of the Tencent WeChat messenger system. Completed surveys were returned by way of either the same system or by email.

3.1 Distance Learning and Motivation Survey

The questions on this survey were divided into several categories, based on the subjects addressed. These categories include:

- 1) Mindset, Engagement, and Happiness: Questions 1-12, 14-17;
- 2) Laziness: Question 13;
- 3) Comparative Online Satisfaction: Questions 18-21;
- 4) Wellbeing: Questions 22-28, with 24-28 being reverse coded;
- 5) Comparative Online Learning: Question 29;
- 6) Instructional Environment Preference: Question 30.

All questions were presented in either a Likert scale or Likert-similar scale format, with the complete list of questions and possible responses included below.

This research instrument was derived from a larger, comprehensively validated one included in the researcher's dissertation (von Goble, 2017), with most questions taken from the third iteration listed in that document. A complete list of questions and the acceptable range of answers can be seen in Tables 1 and 2.

Table 1: Distance Learning and Motivation Survey (Standard Likert Type)

Question (and number)
(1) I am happy to take classes online.
(2) My teachers care about how I am doing in my online studies.
(3) I feel excited about doing work online.
(4) I think the teachers at my school treat students taking online classes fairly.
(5) I take online classes because I get to do interesting things in them.
(6) I take classes online because I like my teachers.
(7) I see the bright side in difficult situations.
(8) I think of myself as a strong person.
(9) I manage my anger in a positive way.
(10) If I am in trouble, I can think of a good solution.
(11) I can reach my goals by trying hard.
(12) I make plans before I do something.
(13) I am lazy.
(14) I do something to improve myself every week.
(15) Distractions rarely keep me from finishing tasks.
(16) I spend time with my friends.
(17) I try to be happy.
(18) I am as happy to take classes online as I was to take in-person classes.
(19) I feel as excited about doing work online as I did about work in in-person classes.
(20) Teachers treat students taking online classes as fairly as they did students taking in-person classes.
(21) My online classes are as interesting as my in-person classes were.

Table 2: Distance Learning and Motivation Survey (non-Likert Type)

Question (and number)	Possible answer categories (Five-option scale)
(22) Since my classes moved online, my diet has _.	Greatly improved . . . greatly worsened
(23) Since my classes moved online, I get _.	Much more exercise . . . much less exercise
(24) Since my classes moved online, I get sick _.	Much more often . . . much less often
(25) Since my classes moved online, I have experienced _.	Much more stress . . . much less stress
(26) Since my classes moved online, I am _.	Much more lonely . . . much less lonely
(27) Since my classes moved online, I get angry _.	Much more often . . . much less often
(28) Since my classes moved online, I get sad _.	Much more often . . . much less often
(29) Since my classes moved online, I am learning _.	Much more . . . much less
(30) If given the option, I would _.	Take all/primarily/some/no class online

3.2 Participant Characteristics

All participants in this research were traditional college-aged students attending higher education institutions in Mainland China. The survey was transmitted to potential participants in early December of 2021, with the final collection date being December 31, 2021. Cohort I participants were approximately 90% female, roughly corresponding to the gender composition of the classes from which they were chosen. All were enrolled in either Issues in Bicultural Education or Educational Research Methods, both of which were classes taught by the researcher at Jilin International Studies University (JISU, Changchun, Jilin, China). Participants in Cohort I majored in education, with no other majors reported. A total of 137 students were asked to participate in this research, and 105 did (76.64% response rate). Those who completed the survey (regardless of answers given) were offered a 5% bonus on their final examinations.

Cohort II participants were recruited by a student-assistant working on behalf of the researcher. The total number of students contacted by the assistant is unknown. Thus, no response rate has been calculated. Cohort II participants were 60% female, with 26% of participants not indicating their gender. Cohort II majors and backgrounds were diverse, with more than 10 institutions throughout China represented and at least an equal number of majors. Unfortunately, sample sizes for each subset of this cohort were too small to allow for meaningful disaggregation.

3.3 Statistical Methods

The relatively small sample sizes for Cohort I and Cohort II and the different methods used in their recruitment limited the utility of complex analytical tools. Rather, simple percentages were used to track performance and overall levels of reported wellbeing and success. Given sample size and collection technique limitations, advanced statistical methods stand to do more to mislead than provide clear evidence of patterns. All information processing was performed in Microsoft Excel 2019. Results were entered into the system, mean scores and sub-scores were calculated to 10 decimal places, and final results were converted to percentages that were rounded to 2 decimal places for the final tables.

4. Results and Discussion

This research suggests that most participants have tolerated the migration to online learning well, with their mental and physical wellbeing having either improved or remained unharmed. They continue to learn, with most believing that online classes, while not perfect, are not intolerable. However, performance and preferences vary significantly based on construct and cohort. It should be noted that not every participant answered every question. Thus, some survey response rates may be less than 100%.

4.1 Mindfulness, Engagement, and Happiness

Self-reported levels of mindfulness, engagement, and happiness (MEH) for both Cohort I and Cohort II suggest that a clear majority of participants were in good mental and physical condition at the time of the survey, with less than 12% of either cohort reporting significant problems. Table 3 provides a more detailed breakdown.

Table 3: Mindfulness, Engagement, and Happiness (in Percentages)

Cohort	Strongly agree	Agree	Neither agree/disagree	Disagree	Strongly disagree
Cohort II	7.36	43.97	31.25	11.61	0.67
Cohort I	30.36	45.66	16.55	6.01	0.6

With *strongly agree* indicating that participants scored highly on measures of mindfulness, engagement, and happiness, and *strongly disagree* indicating that participants scored poorly on these measures, the results of construct-assessment indicate that 82.58% of the Cohort II (the snowball sample) and 92.57% of Cohort I (JISU participants) were performing well in these domains at the time of their survey responses. This outcome is more positive than one might expect in light of certain predictions as to the harmfulness of imposed physical isolation of young people in the educational environment, including those made by Clemens et al. (2020). A review of the Wellbeing section yields similarly (and surprisingly) positive results.

4.2 Laziness

Laziness is an interesting construct in that it is both difficult to measure (with the difference between working slowly and carefully and being lazy not always apparent) and a trait that many might not readily admit to having. Thus, results of a self-assessment of laziness tell as much (if not more) about the mindset, self-confidence, and self-perspective of the participant as they do about the initiative and work ethic of the participant.

Table 4: Laziness (in Percentages)

Cohort	Strongly agree	Agree	Neither agree/disagree	Disagree	Strongly disagree
Cohort II	0	17.86	32.14	36	7.14
Cohort I	8.57	24.76	28.57	28.57	7.62

While most participants of both Cohort I and Cohort II ranked themselves as being either not lazy or indicated that they had no strong feelings on the matter, a surprisingly large percentage (33.33%) of Cohort I indicated that they consider themselves to be lazy.

This suggests that either Cohort I has a considerable number of lazy people in it or that Cohort I has a self-perception of laziness or a tendency towards humbleness. The last possibility may suggest something as to why Cohort I proved less likely to complain about their conditions and environment than Cohort II.

4.3 Wellbeing

Majorities of Cohort I and Cohort II reported either consistent or improving levels of wellbeing during the pandemic, with 94.58% of Cohort II and 95.52% of Cohort I indicating that the pandemic had not negatively impacted their health.

Table 5: Wellbeing (Change During the Pandemic, in Percentages)

Cohort	Greatly improved	Improved	Unchanged	Worsened	Greatly worsened
Cohort II	4.08	27.04	41.52	18.88	3.06
Cohort I	14.69	31.29	40.16	7.48	1.9

While this result is interesting, it provides limited insight into exactly what changed during the pandemic for these students. Disaggregation stands to offer more insight.

Table 6: Wellbeing (Disaggregated Results, in Percentages)*

Question/Cohort	Greatly improved	Improved	Unchanged	Worsened	Greatly worsened
(22) Cohort II	7.14	35.71	32.14	17.86	3.57
(22) Cohort I	12.38	25.71	57.14	2.86	0
(23) Cohort II	10.71	21.43	21.43	28.57	7.14
(23) Cohort I	10.48	27.62	39.05	20	0.95
(24) Cohort II	3.57	17.86	53.57	17.86	0
(24) Cohort I	13.33	31.43	46.67	2.86	2.86
(25) Cohort II	0	25	46.43	21.43	3.57
(25) Cohort I	4.76	48.57	36.19	7.62	0.95
(26) Cohort II	0	25	46.43	17.86	7.14
(26) Cohort I	8.57	21.90	52.38	9.52	5.71
(27) Cohort II	7.14	35.71	42.86	10.71	0
(27) Cohort I	25.71	30.48	36.19	3.81	1.90
(28) Cohort II	0	28.57	46.43	17.86	0
(28) Cohort I	27.62	33.33	30.48	5.71	0.95

*Results for Questions 24 through 28 have been corrected for their reverse coding.

Disaggregation reveals two significant patterns. The first is that Cohort II was considerably more likely to report a worsened condition than Cohort I across the domains. The second is that only two domain/questions yielded a strongly negative result (>15% combined worsened and greatly worsened score) for both cohorts. These questions—23 and 26—address exercise and loneliness, respectively. Given that

participants in the course of the COVID shutdown were largely prohibited from going outside and interacting with others, lower reported levels of exercise and higher reported levels of loneliness should not be unexpected.

Cohort II was considerably more likely to report dissatisfaction than Cohort I across multiple domains, with Cohort II reporting degradation to the quality of their diet (Question 22), more frequent illnesses (Question 24), increased levels of stress (Question 25), and greater frequency of sad/unhappy feelings (Question 28).

Despite these noteworthy areas of elevation, this research does not support the notion that either cohort was demonstrably and consistently worse off for their remote learning experience. The only area to show significant harm (>30% for either cohort) is in exercise—a problem that is more indicative of the nature of COVID restrictions than it is that of online learning per se.

4.4 Comparative Online Learning

Comparative Online Learning (if participants learned more or less online, compared to in the classroom) is a single-question construct (Question 29), which limits both the detail of the information provided and the overall certainty with which one can base conclusions on it. This is not to say that it is unworthy of consideration.

Table 7: Comparative Online Learning (in Percentages)

Cohort	Learned much more	Learned more	No change	Learned less	Learned much less
Cohort II	0	28.57	42.86	14.29	7.14
Cohort I	12.38	32.38	38.1	14.29	0.95

A clear majority (>70%) of participants in both Cohort I and II reported learning as much or more online as they did in ordinary classes. As is the pattern throughout this research, Cohort II appeared more likely to be dissatisfied than Cohort I, but by a rate of less than 7%. This establishes that majorities of both groups found the online learning experience to be at least as good (from a purely educational perspective) as the traditional classroom experience.

4.5 Instructional Environment Preference

Participants were given 5 options for ideal learning environments: (completely) *online*, (completely) in the *classroom*, *mostly online* (with some classroom instruction/classes), *mostly* (in the) *classroom* (with some online instruction/classes), and *no preference*.

Table 8: Instructional Environment Preference (in Percentages)

Cohort	Online	Classroom	Mostly online	Mostly classroom	No preference
Cohort II	0	17.86	17.86	57.14	0
Cohort I	20	8.57	43.81	19.05	7.62

Both Cohort I and Cohort II expressed a clear preference for a varied approach to instruction, with Cohort II favoring the *mostly classroom* option (57.14%) and Cohort I

favoring the *mostly online* option (43.81%). Neither group expressed much interest in the purely *online* or purely *classroom* options.

These preferences follow a widely documented preference for a mixture of online and classroom instruction, one that offers learners the convenience of some remote-study options and the opportunity for some social interaction in the classroom (Kelly, 2021).

4.6 Comparing Cohorts

Across almost every dimension, Cohort I reported higher levels of satisfaction with online learning and lower levels of physical or mental illness from the move to online learning than did Cohort II. The only construct on which Cohort I scored consistently higher was self-reported levels of laziness.

Determining the reasons for these score differences is difficult. However, several clear possibilities exist.

First, there is the possibility that the members of Cohort I simply had radically different experiences than did the members of Cohort II. All Cohort I participants were students at Jilin International Studies University (JISU). JISU is one of a select number of fully accredited private Chinese universities. The operation and standards of the school may be different from the institutions attended by members of Cohort II.

Second, there is the possibility that JISU students may have different standards or expectations from those of other schools. Their consistently greater inclination to report themselves as being lazy (33.33% for Cohort I versus 17.86% for Cohort II), a trait almost universally seen as negative, may well be an indication of a different mindset. Research conducted in the West suggests that most people consider themselves to be moral and intellectually above average (May, 2017). This may not be as much the case for Asians, with them having somewhat lower reported levels of self-esteem (Bachman et al., 2011). However, this does little to explain differences in Cohort I and Cohort II, both of which consist entirely of Chinese participants.

Third, there is the chance that Cohort I and Cohort II are radically different due to the different sampling methods used. Cohort I consists of a high-response rate (>70%) sample from a single institution. Cohort II consists of an unknown-response rate sample from multiple institutions. Additionally, Cohort I participants were given an incentive to respond in the form of bonus points on their final course grades. Cohort II participants had no incentive to respond aside from their desire to contribute to the research.

Within the field of consumer research, customers are more likely to report and publicize bad experiences than positive ones (Dimensional Research, 2013). While consumer research is distinct from educational research, this may suggest a bias in the self-reporting mechanism.

Regardless of these differences, participants in both Cohort I and II appear to be faring reasonably well in the online learning (and socially distanced) environment.

5. Recommendations

This research suggests quality of life and education can be improved for students in the distance-learning/COVID era. Methods to make said improvements are likely to address matters of:

- 1) Exercise and physical fitness;
- 2) Loneliness and social interaction;
- 3) The in-person/remote learning instructional ratio.

5.1 Exercise and Fitness

A significant percentage (21.43%) of participants in Cohort II reported that their diet had worsened or greatly worsened in the course of the distance-learning/COVID era. While Cohort I did not report as strongly negative results (2.86% worsened or greatly worsened), there is considerable room for improvement in both groups. Given the relationship between proper diet, health, and mood, providing students with healthier foods would stand to improve their condition during an enforced period of distance learning or social isolation. Even purely voluntary participants in remote learning might stand to benefit from increased healthy food options. This is particularly worthy of consideration given that 60% of Americans reported unwanted weight gain during the pandemic (American Psychological Association, 2022). While information on weight gain in China during this period is not readily available, the United States trend suggests that such has the potential to be the case in many countries depending upon the extent to which they adopted Americans' habits and diet. Healthy and calorically appropriate diets would stand to address this problem, wherever and whenever it occurs.

5.2 Loneliness

Loneliness (Question 26) was the only negative metric that saw a significant increase for Cohort I and Cohort II. As is the case for other potential problems, Cohort II (25%) reported considerably greater levels of loneliness than did Cohort I (15.23%). Loneliness in the time of enforced isolation is a significant concern; however, several practical solutions exist.

There is the possibility of small-group meetings and interaction. Small groups (pods) could be organized for social and recreational activities. Assuming these groups are reasonably well segregated from each other, they could provide structured social engagement and opportunities for networking and community building without breaking quarantine restrictions.

Even outside the context of COVID, there is the risk of online learners developing feelings of loneliness due to the nature of distance education. Physical workgroups and study groups may not always be practical for students who live far away from campus. However, virtual study groups and periodic check-ins on the part of teachers or their assistants might well do something to alleviate perceived social isolation and to continue to engage them in the learning process.

5.3 In-person/Remote Learning Instructional Ratio

Clear majorities (>60%) of Cohort I and Cohort II indicated a preference for mixed instructional opportunities. Given that Chinese higher educational institutions rarely allow online learning in normal circumstances, this suggests an opportunity for change and improvement. By offering students a combination of online and in-person classes, institutions could stand to improve student satisfaction, reduce the risk of disease transmission, and make better use of limited classroom space.

5.4 Further Research

Comparisons between Cohort I and Cohort II results are imperfect due to the different sample collection techniques used and the radically different sample sizes. Nevertheless, some patterns common to both Cohort I and II can be identified. A point in need of additional investigation is why some students in each cohort responded to the remote-learning experience well, whereas others responded poorly. Information gathered during this research does not allow for any meaningful conclusions to be made regarding differences in mindset or background between those best adapted to distance learning and those comparatively poorly adapted. Phipps and Merisotis (1999) addressed this matter in some detail; however, their research is relatively limited, and intervening decades and significant technological development may well have changed both the overall and relative significance of the factors they identified as correlating with distance-learning success. Other referenced research on this topic (Lee et al., 2021) is more recent, but it was not focused on Chinese students.

The most positive and significant finding of this research is how very successfully participants in both cohorts (and Cohort I in particular) appear to have adapted to the socially distanced and remote learning environment compared to their Western peers. The reasons for this finding remain unknown. Perhaps Chinese students have higher levels of self-efficacy, greater self-discipline, or a better-internalized locus of control relative to students in the West. Perhaps their working and living conditions provide them with more support and encouragement, inoculating them to some of the deleterious effects of isolation. Perhaps they are simply less likely to report anxiety or stress. Any, all, or none of these explanations could be valid. Without further research into the matter, one can only speculate.

6. Conclusion

This research provides limited insight into the conditions and obstacles faced by Chinese university students; however, it serves as a starting point, and it suggests several areas of possible research. Most importantly, it establishes that many of the more negative predictions as to the effects of the sudden transition to distance learning have not proven entirely true. The participants in this research have fared reasonably well. This is all the more noteworthy given both how sudden the transition to university-level distance in China was and how little prior exposure many students had to this mode of instructional delivery.

Despite the many problems and limitations distance learning faces in China, it will almost certainly see considerable growth. This will afford students and educators alike new opportunities and present them with new challenges, all of which will require comprehensive scientific study.

Conflict of Interest Statement

The authors declare no conflicts of interests.

About the Author

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References

- Alpert, W., Couch, K., & Harmon, O. (2016). A randomized assessment of online learning. *American Economic Review*, 106(5), 378-382.
- American Psychological Association. (2022, March). Slightly more than 6 in 10 U.S. adults (61%) report undesired weight change since start of pandemic. <https://www.apa.org/news/press/releases/2021/03/march-weight-change>
- Anderson, B., & Simpson, M. (2012). History and heritage in distance education. *Journal of Open, Flexible, and Distance Learning*, 16(2), 1-10.
- Bachman, J., O'Malley P., Freedman-Doan, P., Trzesniewski, K., & Donnellan, M. (2011). Adolescent self-esteem: Differences by race/ethnicity, gender, and age. *Self Identity*, 10(4). 445-473.
- Cellini, S., & Grueso, H. (2021, May 18) Student learning in online college programs. *AERA Open*. <https://journals.sagepub.com/doi/full/10.1177/23328584211008105>
- Clemens, V., Deschamps, P., Fegert, J., Anagnostopoulos, D., Bailey, S., Doyle, M., Eliez, S., Hansen, A., Hebebrand, J., Hillegers, M., Jacobs, B., Karwautz, A., Kiss, E., Kotsis, K., Kumperscak, H., Pejovic-Milovancevic, M., Christensen, A., Raynaud, J., Westerinen, H. & Visnapuu-Bernadt, P. (2020). Potential effects of "social" distancing measures and school lockdown on child and adolescent mental health. *European Child & Adolescent Psychiatry*, 29, 739-742.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.
- Dimensional Research. (2013, April). Customer service and business results: A survey of customer service from mid-size companies. <https://tinyurl.com/yckj29u8>
- Duckworth, A., Peterson, C., Matthews, M., & Kelly, D. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087-1101.

- Figlio, D., Rush, M., & Yin, L. (2010, June). Is it live or is it internet? Experimental estimates of the effects of online instruction on student learning. (Working Paper No. 16089). National Bureau of Economic Research. <https://www.nber.org/papers/w16089>
- Garad, A., Al-Ansi, A., & Qamari, I. (2021). The role of e-learning infrastructure and cognitive competence in distance learning effectiveness during the COVID-19 pandemic. *Cakrawala Pendidikan*, 40(1), 81-91.
- Gleason, M. (2017). Families without schools: Rurality, correspondence education, and the promise of schooling in interwar western Canada. *History of Education Quarterly*, 57(3), 305-330.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, M. (2020, March 27). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
- Kelly, R., (2021, May 13). 73 percent of students prefer some courses be fully online post-pandemic. Campus Technology. <https://campustechnology.com/articles/2021/05/13/73-percent-of-students-prefer-some-courses-be-fully-online-post-pandemic.aspx>
- Lee, J., Jeong, H., & Ki, S. (2021). Stress, anxiety, and depression among undergraduate students during the COVID-19 pandemic and their use of mental health services. *Innovative Higher Education*, 46, 519-538.
- Li, C., & Lalani, F. (2020, April 29). The COVID-19 pandemic has changed education forever. This is how. World Economic Forum. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>
- Liu, H., & Yen, J. (2014). Effects of distance learning on learning effectiveness. *Eurasia Journal of Mathematics, Science & Technology Education*, 10(6), 575-580.
- May, C. (2017, January 31). Most people consider themselves to be morally superior. *Scientific American*. <https://www.scientificamerican.com/article/most-people-consider-themselves-to-be-morally-superior/>
- Muñoz-Najar, A., Gilberto, A., Hasan, A., Cobo, C., Azevedo, J., & Akmal, M. (2021). Remote learning during COVID-19: Lessons from today, principles for tomorrow. The World Bank. <https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic>
- Ni, A. (2013). Comparing the effectiveness of classroom and online learning: Teaching research methods. *Journal of Public Affairs Education*, 19(2), 199-215.
- Phipps, R., & Merisotis, J. (1999). What's the difference? a review of contemporary research on the effectiveness of distance learning in higher education. Institute for Higher Education Policy. <https://eric.ed.gov/?q=ED429524>
- Piehl, C., Plener, P., Probst, P., Dale, R., & Humer, E. (2021). Assessment of mental health of high school students during social distancing and remote schooling during the COVID-19 pandemic in Austria. *JAMA Network Open*, 4(6), 1-4.

- Schaeffer, K. (2021, October 1). What we know about online learning and the homework gap amid the pandemic. Pew Research Center. <https://www.pewresearch.org/fact-tank/2021/10/01/>
- Truzoli, R., Pirola, V., & Conte, S. (2021). The impact of risk and protective factors on online teaching experience in high school Italian teachers during the COVID-19 pandemic. *Journal of Computer Assisted Learning*, 37, 940-952.
- von Goble, B. (2017). The Goal-driven, Resilient, and Influential Teens Program in Kentucky high schools: The Impact on social and emotional learning and influencing factors. [Unpublished doctoral dissertation]. Western Kentucky University.
- Zhang, W., & Li, W. (2019). Transformation from RTVUs to open universities in China: Current state and challenges. *International Review of Research in Open and Distributed Learning*, 20(4), 1-20.
- Zheng, M., Bender, D., & Lyon, C. (2021). Online learning during COVID-19 produced equivalent or better student course performance as compared with pre-pandemic: Empirical evidence from a school-wide comparative study. *BMC Medical Education*, 21, 495.

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