Tables and figures explaining the Dataset of Vietnamese student's learning habit during COVID-19

Descriptive statistics on student's learning behavior during school closure due to COVID-19 based on 12 different parameters are presented in Table 1, Table 2, Table 3, Table 4, Table 5, Table 6, Table 7, Table 8, Table 9, Table 10, Table 11, Table 12. Figures 1~12 present those data in bar charts, respectively.

Table 1. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Gender).

	Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
GEN DER	Male							
		Total	166	3.78	2.905	3.33	4.22	0	15
		Total Online	166	2.77	3.129	2.29	3.25	0	21
		Total Offline	166	2.95	3.186	2.46	3.43	0	21
		Hours with instruction	166	1.61	2.488	1.23	1.99	0	20
		Hours wihout instruction	166	4.11	4.825	3.37	4.85	0	42
	Female	Total	239	3.80	2.653	3.47	4.14	0	12
		Total Online	239	2.60	3.061	2.21	2.99	0	30
		Total Offline	239	2.90	2.451	2.59	3.21	0	11
		Hours with instruction	239	1.07	1.641	.86	1.28	0	10
		Hours wihout instruction	239	4.43	4.167	3.90	4.96	0	31
	Not public	Total	15	3.80	2.704	2.30	5.30	0	10
		Total Online	15	4.27	5.257	1.36	7.18	0	18
		Total Offline	15	3.33	4.220	1.00	5.67	0	17
		Hours with instruction	15	2.60	3.542	.64	4.56	0	12
		Hours wihout instruction	15	5.00	3.854	2.87	7.13	0	12

Table 2. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (School type).

	Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
School type	Public school (normal)	Total	186	3.44	2.584	3.06	3.81	0	15
		Total Online	186	2.33	2.630	1.95	2.71	0	20
		Total Offline	186	2.77	2.792	2.37	3.18	0	20
		Hours with instruction	186	1.30	2.202	.98	1.61	0	20
		Hours wihout instruction	186	3.81	3.264	3.34	4.28	0	20
	Public school (Gifted)	Total	132	4.15	2.951	3.64	4.66	0	12
		Total Online	132	2.67	3.149	2.12	3.21	0	18
		Total Offline	132	3.17	2.728	2.70	3.64	0	12

	Learning hours	Total	Mean	Std. Deviation	Lower Bound	Upper Bound	Min	Max
	Hours with instruction	132	.80	1.714	.51	1.10	0	12
	Hours wihout instruction	132	5.04	4.751	4.22	5.86	0	24
Private school (normal)	Total	94	4.03	2.682	3.48	4.58	0	12
	Total Online	94	3.65	4.026	2.82	4.47	0	30
	Total Ofline	94	3.01	3.085	2.38	3.64	0	21
	Hours with instruction	94	2.11	2.274	1.64	2.57	0	10
	Hours wihout instruction	94	4.55	5.743	3.38	5.73	0	42
International school	Total	8	3.38	3.335	.59	6.16	0	9
	Total Online	8	2.00	3.207	-.68	4.68	0	8
	Total Ofline	8	1.75	2.053	.03	3.47	0	5
	Hours with instruction	8	2.00	2.138	.21	3.79	0	5
	Hours wihout instruction	8	1.75	2.121	-.02	3.52	0	5

Table 3. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Grade level).

		Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Grade level	Secondary school	Total	234	3.95	2.721	3.60	4.30	0	15
		Total Online	234	2.90	3.335	2.47	3.33	0	30
		Total Ofline	234	2.91	2.847	2.54	3.27	0	21
		Hours with instruction	234	1.51	2.167	1.23	1.79	0	20
		Hours wihout instruction	234	4.30	4.554	3.71	4.89	0	42
	High school	Total	186	3.60	2.783	3.19	4.00	0	12
		Total Online	186	2.51	3.000	2.07	2.94	0	18
		Total Ofline	186	2.97	2.817	2.56	3.38	0	17
		Hours with instruction	186	1.12	2.055	.82	1.42	0	12
		Hours wihout instruction	186	4.35	4.266	3.74	4.97	0	24

Table 4. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Family income).

		Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Family income	Less than 430 USD	Total	62	3.44	2.393	2.83	4.04	0	10
		Total Online	62	2.44	2.170	1.88	2.99	0	8
		Total Ofline	62	3.06	2.573	2.41	3.72	0	11

	Learning hours	Total	Mean	Std. Deviation	Lower Bound	Upper Bound	Min	Max
	Hours with instruction	62	1.37	1.935	.88	1.86	0	8
	Hours wihout instruction	62	4.13	3.546	3.23	5.03	0	16
From 430 to under 860 USD	Total	141	3.35	2.394	2.96	3.75	0	12
	Total Online	141	2.20	2.198	1.83	2.56	0	10
	Total Ofline	141	2.74	2.598	2.30	3.17	0	17
	Hours with instruction	141	1.13	1.591	.87	1.40	0	7
	Hours wihout instruction	141	3.80	3.298	3.25	4.35	0	18
From 860 to under 1,290 USD	Total	97	4.01	3.084	3.39	4.63	0	15
	Total Online	97	3.06	4.227	2.21	3.91	0	30
	Total Ofline	97	3.00	3.072	2.38	3.62	0	20
	Hours with instruction	97	1.42	2.621	.89	1.95	0	20
	Hours wihout instruction	97	4.64	5.300	3.57	5.71	0	31
From 1,290 to under 1,720 USD	Total	50	4.56	2.666	3.80	5.32	0	10
	Total Online	50	2.88	2.616	2.14	3.62	0	10
	Total Ofline	50	3.16	2.668	2.40	3.92	0	10
	Hours with instruction	50	1.30	1.821	.78	1.82	0	8
	Hours wihout instruction	50	4.74	4.179	3.55	5.93	0	18
From 1,720 to under 2,150 USD	Total	30	4.47	3.224	3.26	5.67	0	12
	Total Online	30	3.73	3.062	2.59	4.88	0	10
	Total Ofline	30	2.83	2.493	1.90	3.76	0	10
	Hours with instruction	30	2.00	2.491	1.07	2.93	0	10
	Hours wihout instruction	30	4.57	3.626	3.21	5.92	0	16
Over 2,150	Total	40	3.90	3.095	2.91	4.89	0	12
	Total Online	40	3.28	4.766	1.75	4.80	0	21
	Total Ofline	40	3.05	3.796	1.84	4.26	0	21
	Hours with instruction	40	1.33	2.712	.46	2.19	0	12
	Hours wihout instruction	40	5.00	6.976	2.77	7.23	0	42

Table 5. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Siblings).

		Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Siblings	One person	Total	38	3.55	3.422	2.43	4.68	0	15
		Total Online	38	2.92	3.996	1.61	4.23	0	20
		Total Ofline	38	3.29	3.999	1.97	4.60	0	20
		Hours with instruction	38	1.58	3.350	.48	2.68	0	20

	Learning hours	Total	Mean	Std. Deviation	Lower Bound	Upper Bound	Min	Max
	Hours wihout instruction	38	4.63	5.329	2.88	6.38	0	20
Two persons	Total	247	3.90	2.636	3.57	4.23	0	12
	Total Online	247	2.60	2.665	2.27	2.94	0	18
	Total Ofline	247	2.74	2.424	2.44	3.04	0	17
	Hours with instruction	247	1.32	1.921	1.08	1.56	0	12
	Hours wihout instruction	247	4.03	3.442	3.60	4.46	0	24
Three persons	Total	57	3.40	2.744	2.68	4.13	0	10
	Total Online	57	2.96	4.400	1.80	4.13	0	30
	Total Ofline	57	2.53	2.323	1.91	3.14	0	11
	Hours with instruction	57	.77	1.464	.38	1.16	0	8
	Hours wihout instruction	57	4.72	5.150	3.35	6.09	0	31
Over 4 persons	Total	78	3.85	2.773	3.22	4.47	1	12
	Total Online	78	2.85	3.303	2.10	3.59	0	21
	Total Ofline	78	3.67	3.515	2.87	4.46	0	21
	Hours with instruction	78	1.69	2.332	1.17	2.22	0	10
	Hours wihout instruction	78	4.82	5.917	3.49	6.15	0	42

Table 6. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Father's job).

		Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Father's job	STEM	Total	141	3.87	2.686	3.43	4.32	0	15
		Total Online	141	2.72	2.670	2.28	3.17	0	20
		Total Ofline	141	2.94	2.920	2.46	3.43	0	20
		Hours with instruction	141	1.55	2.500	1.13	1.96	0	20
		Hours wihout instruction	141	4.12	3.392	3.56	4.69	0	20
	Social siences	Total	172	3.99	2.884	3.55	4.42	0	12
		Total Online	172	3.02	3.874	2.44	3.61	0	30
		Total Ofline	172	3.06	2.894	2.63	3.50	0	21
		Hours with instruction	172	1.26	1.972	.96	1.56	0	12
		Hours wihout instruction	172	4.83	5.402	4.01	5.64	0	42
	Free	Total	73	3.47	2.729	2.83	4.10	0	11
		Total Online	73	2.33	2.754	1.69	2.97	0	11
		Total Ofline	73	2.95	2.823	2.29	3.60	0	11
		Hours with instruction	73	1.27	1.895	.83	1.72	0	9
		Hours wihout instruction	73	4.00	4.200	3.02	4.98	0	22

	Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Min	Max
Others	Total	34	3.18	2.302	2.37	3.98	0	12
	Total Online	34	2.09	1.913	1.42	2.76	0	7
	Total Ofline	34	2.21	2.027	1.50	2.91	0	9
	Hours with instruction	34	.97	1.566	.42	1.52	0	7
	Hours wihout instruction	34	3.32	2.682	2.39	4.26	0	14

Table 7. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Mother's job).

	Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Min	Max
Mother's job								
Stem	Total	32	3.88	2.756	2.88	4.87	0	12
	Total Online	32	2.84	2.737	1.86	3.83	0	12
	Total Ofline	32	3.09	2.493	2.19	3.99	0	12
	Hours with instruction	32	1.97	1.926	1.27	2.66	0	7
	Hours wihout instruction	32	3.97	4.454	2.36	5.57	0	24
Social siences	Total	270	4.01	2.862	3.67	4.36	0	15
	Total Online	270	2.81	3.109	2.43	3.18	0	21
	Total Ofline	270	3.05	3.040	2.68	3.41	0	21
	Hours with instruction	270	1.36	2.309	1.08	1.63	0	20
	Hours wihout instruction	270	4.50	4.481	3.96	5.04	0	42
Free	Total	63	3.03	2.514	2.40	3.66	0	10
	Total Online	63	2.56	4.402	1.45	3.66	0	30
	Total Ofline	63	2.73	2.737	2.04	3.42	0	11
	Hours with instruction	63	.95	1.708	.52	1.38	0	9
	Hours wihout instruction	63	4.33	5.334	2.99	5.68	0	31
Others	Total	55	3.53	2.300	2.91	4.15	0	10
	Total Online	55	2.45	2.062	1.90	3.01	0	10
	Total Ofline	55	2.51	1.904	1.99	3.02	0	8
	Hours with instruction	55	1.31	1.609	.87	1.74	0	8
	Hours wihout instruction	55	3.65	2.661	2.94	4.37	0	14

Table 8. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Occupational Aspiration).

	Learning hours	Total	Mean	Std. Deviation	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Min	Max
A	Total	52	3.44	2.209	2.83	4.06	0	9

			Total	Mean	Std. Deviation	Lower Bound	Upper Bound	Min	Max
Occupational Aspiration		Total Online	52	2.83	2.084	2.25	3.41	0	8
		Total Ofline	52	2.27	1.921	1.73	2.80	0	8
		Hours with instruction	52	1.63	2.205	1.02	2.25	0	9
		Hours without instruction	52	3.46	2.469	2.77	4.15	0	10
	A1	Total	64	4.70	2.758	4.01	5.39	0	12
		Total Online	64	3.47	3.568	2.58	4.36	0	18
		Total Ofline	64	3.70	2.915	2.97	4.43	0	12
		Hours with instruction	64	1.34	1.887	.87	1.82	0	12
		Hours without instruction	64	5.83	5.302	4.50	7.15	0	24
	B	Total	23	4.48	2.192	3.53	5.43	1	9
		Total Online	23	3.17	1.875	2.36	3.98	0	7
		Total Ofline	23	3.57	2.643	2.42	4.71	1	10
		Hours with instruction	23	1.96	2.266	.98	2.94	0	7
		Hours without instruction	23	4.78	2.844	3.55	6.01	1	12
	C	Total	22	3.32	3.414	1.80	4.83	0	12
		Total Online	22	4.27	7.363	1.01	7.54	0	30
		Total Ofline	22	2.50	4.362	.57	4.43	0	21
		Hours with instruction	22	.95	1.327	.37	1.54	0	4
		Hours without instruction	22	5.82	10.423	1.20	10.44	0	42
	D	Total	187	3.74	2.863	3.32	4.15	0	15
		Total Online	187	2.42	2.877	2.00	2.83	0	20
		Total Ofline	187	3.02	2.954	2.59	3.44	0	20
		Hours with instruction	187	1.15	2.219	.83	1.47	0	20
		Hours without instruction	187	4.28	3.898	3.72	4.85	0	22
	Other	Total	72	3.31	2.587	2.70	3.91	0	10
		Total Online	72	2.18	2.254	1.65	2.71	0	10
		Total Ofline	72	2.44	2.264	1.91	2.98	0	10
		Hours with instruction	72	1.51	2.149	1.01	2.02	0	10
		Hours without instruction	72	3.11	2.625	2.49	3.73	0	10

Table 9. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Learning hours at home before COVID-19).

student's learning behavior (during COVID-19)			Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Learning hours at	Under 4h	Total	312	2.97	2.088	2.74	3.20	0	12
		Total Online	312	2.11	2.801	1.79	2.42	0	30

home before COVID-19		Total Ofline	312	2.45	2.478	2.17	2.72	0	21
		Hours with instruction	312	1.11	1.684	.92	1.30	0	12
		Hours without instruction	312	3.44	3.935	3.00	3.88	0	42
	From 4 to 7h	Total	93	5.91	2.936	5.31	6.52	0	12
		Total Online	93	4.18	3.176	3.53	4.84	0	12
		Total Ofline	93	4.08	2.818	3.49	4.66	0	12
		Hours with instruction	93	1.72	2.252	1.26	2.18	0	11
		Hours without instruction	93	6.54	4.415	5.63	7.45	0	24
	Over 7h	Total	15	7.80	3.278	5.98	9.62	2	15
		Total Online	15	6.60	5.082	3.79	9.41	0	20
		Total Ofline	15	6.00	5.210	3.11	8.89	0	20
		Hours with instruction	15	3.67	5.551	.59	6.74	0	20
		Hours without instruction	15	8.93	6.408	5.38	12.48	0	20

Table 10. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Self-evaluation on academic performance).

student's learning behavior (during COVID-19)			Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Self-evaluation on academic performance	Excellence	Total	53	4.57	3.092	3.71	5.42	0	10
		Total Online	53	3.04	2.773	2.27	3.80	0	10
		Total Ofline	53	2.51	2.367	1.86	3.16	0	10
		Hours with instruction	53	1.21	1.885	.69	1.73	0	8
		Hours without instruction	53	4.34	3.519	3.37	5.31	0	18
	Good	Total	251	3.97	2.801	3.62	4.32	0	15
		Total Online	251	2.94	3.597	2.49	3.39	0	30
		Total Ofline	251	3.25	3.087	2.86	3.63	0	21
		Hours with instruction	251	1.37	2.258	1.09	1.65	0	20
		Hours without instruction	251	4.82	4.891	4.21	5.42	0	42
	Average	Total	109	3.11	2.327	2.67	3.55	0	12
		Total Online	109	2.11	2.229	1.69	2.53	0	12
		Total Ofline	109	2.39	2.325	1.95	2.84	0	12
		Hours with instruction	109	1.32	1.929	.95	1.69	0	11
		Hours without instruction	109	3.18	3.386	2.54	3.83	0	24
	Below Average	Total	7	2.14	1.773	.50	3.78	0	5
		Total Online	7	2.29	2.628	-.14	4.72	0	7

					95% Confidence Interval for Mean			
					Lower Bound	Upper Bound		
	Total Ofline	7	3.29	2.289	1.17	5.40	0	7
	Hours with instruction	7	1.29	2.215	-.76	3.33	0	5
	Hours without instruction	7	4.29	4.716	-.08	8.65	0	14

Table 11. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (English).

student's learning behavior (during COVID-19)		Total	Mean	Std. Deviation	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
English	Excellence							
		Total	59	4.71	3.275	3.86	5.57	0	15
		Total Online	59	3.29	3.499	2.38	4.20	0	20
		Total Ofline	59	3.17	3.394	2.28	4.05	0	20
		Hours with instruction	59	1.39	2.983	.61	2.17	0	20
		Hours without instruction	59	5.07	4.362	3.93	6.20	0	22
	Good	Total	191	3.95	2.759	3.56	4.35	0	12
		Total Online	191	2.84	3.633	2.32	3.36	0	30
		Total Ofline	191	3.04	3.015	2.61	3.47	0	21
		Hours with instruction	191	1.33	1.936	1.05	1.61	0	12
		Hours without instruction	191	4.55	5.129	3.82	5.29	0	42
	Average	Total	135	3.36	2.390	2.96	3.77	0	12
		Total Online	135	2.49	2.473	2.07	2.91	0	12
		Total Ofline	135	2.79	2.287	2.40	3.17	0	12
		Hours with instruction	135	1.44	2.047	1.09	1.79	0	11
		Hours without instruction	135	3.84	3.462	3.25	4.43	0	24
	Below Average	Total	35	3.03	2.640	2.12	3.94	0	12
		Total Online	35	2.06	2.363	1.25	2.87	0	10
		Total Ofline	35	2.51	2.683	1.59	3.44	0	11
		Hours with instruction	35	.89	1.659	.32	1.46	0	7
		Hours without instruction	35	3.69	3.437	2.51	4.87	0	16

Table 12. Descriptive statistics of the number of student's learning behavior (during COVID-19) with parameter (Internet and Additional Resources).

student's learning behavior (during COVID-19)	Total	Mean	Std. Deviation	95% Confidence Interval for Mean	Min	Max

Internet and Resources						Lower Bound	Upper Bound		
	Strongly agree	Total	223	3.83	2.732	3.47	4.19	0	12
		Total Online	223	2.67	2.847	2.30	3.05	0	18
		Total Ofline	223	2.63	2.356	2.32	2.94	0	12
		Hours with instruction	223	1.14	1.814	.90	1.38	0	12
		Hours without instruction	223	4.16	4.015	3.63	4.69	0	24
	Agree	Total	106	3.94	3.023	3.36	4.53	0	15
		Total Online	106	3.14	4.306	2.31	3.97	0	30
		Total Ofline	106	3.27	3.579	2.58	3.96	0	21
		Hours with instruction	106	1.59	2.643	1.09	2.10	0	20
		Hours without instruction	106	4.82	5.712	3.72	5.92	0	42
	Neither agree nor disagree	Total	74	3.59	2.398	3.04	4.15	0	10
		Total Online	74	2.39	2.316	1.86	2.93	0	10
		Total Ofline	74	3.27	2.815	2.62	3.92	0	11
		Hours with instruction	74	1.28	1.847	.86	1.71	0	9
		Hours without instruction	74	4.38	3.494	3.57	5.19	0	16
	Disagree	Total	11	3.00	3.000	.98	5.02	0	10
		Total Online	11	1.55	1.864	.29	2.80	0	5
		Total Ofline	11	2.64	3.042	.59	4.68	0	10
		Hours with instruction	11	2.00	2.191	.53	3.47	0	6
		Hours without instruction	11	2.18	1.991	.84	3.52	0	5
	Strongly disagree	Total	6	3.67	2.503	1.04	6.29	1	8
		Total Online	6	3.67	3.204	.30	7.03	0	8
		Total Ofline	6	4.67	3.077	1.44	7.90	1	8
		Hours with instruction	6	3.50	4.037	-.74	7.74	0	9
		Hours without instruction	6	4.83	6.014	-1.48	11.14	0	16

Figures from 13 to 18 visualize the descriptive statistic of number of student's learning hours (before and during COVID-19) based on student's different perceptions about self-learning, which are presented in Table 13, Table 14, Table 15, Table 16, Table 17, Table 18.

Table 13. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (Self-learning to ensure the academic progress)

Self-learning to ensure the academic progress	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	7	1	16	67	35
		from 4 to 7h	3	1	3	19	6
		over 7h	0	0	2	4	2
	Learn hour during COVID	under 4h	7	1	13	45	25
		from 4 to 7h	3	1	5	35	11
		over 7h	0	0	3	10	7
Female	Learn hour before COVID	under 4h	8	3	28	100	35
		from 4 to 7h	6	1	5	29	17
		over 7h	0	0	0	6	1
	Learn hour during COVID	under 4h	6	4	23	72	24
		from 4 to 7h	5	0	9	48	18
		over 7h	3	0	1	15	11
Not public	Learn hour before COVID	under 4h	0	0	2	9	1
		from 4 to 7h	0	0	0	2	1
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	0	0	8	1
		from 4 to 7h	0	0	2	3	0
		over 7h	0	0	0	0	1

Table 14. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (To maintain learning habit)

To maintain learning habit			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	5	1	30	55	35
		from 4 to 7h	3	0	3	19	7
		over 7h	0	0	3	3	2
	Learn hour during COVID	under 4h	5	1	27	40	18
		from 4 to 7h	3	0	6	28	18
		over 7h	0	0	3	9	8
Female	Learn hour before COVID	under 4h	8	4	25	111	26
		from 4 to 7h	4	1	6	29	18
		over 7h	0	0	0	4	3
	Learn hour during COVID	under 4h	5	4	20	83	17
		from 4 to 7h	5	1	9	50	15
		over 7h	2	0	2	11	15
Not public	Learn hour before COVID	under 4h	0	0	2	9	1
		from 4 to 7h	0	0	0	3	0
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	0	2	6	1
		from 4 to 7h	0	0	0	5	0

	over 7h	0	0	0	1	0

Table 15. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (Because my teachers show me that it is necessary)

Because my teachers show me that it is necessary			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	11	7	25	51	32
		from 4 to 7h	4	1	5	16	6
		over 7h	0	0	1	5	2
	Learn hour during COVID	under 4h	8	8	19	33	23
		from 4 to 7h	6	0	10	28	11
		over 7h	1	0	2	11	6
Female	Learn hour before COVID	under 4h	8	8	36	104	18
		from 4 to 7h	6	3	8	32	9
		over 7h	0	1	2	3	1
	Learn hour during COVID	under 4h	3	5	27	82	12
		from 4 to 7h	6	4	13	46	11
		over 7h	5	3	6	11	5
Not public	Learn hour before COVID	under 4h	0	0	5	6	1
		from 4 to 7h	0	0	1	2	0
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	0	3	6	0
		from 4 to 7h	0	0	3	1	1
		over 7h	0	0	0	1	0

Table 16. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (Because my parents show me that it is necessary)

Because my parents show me that it is necessary			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	10	5	22	52	37
		from 4 to 7h	3	1	4	15	9
		over 7h	0	0	2	4	2
	Learn hour during COVID	under 4h	8	5	18	35	25
		from 4 to 7h	4	1	8	27	15
		over 7h	1	0	2	9	8

			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Female	Learn hour before COVID	under 4h	7	8	40	100	19
		from 4 to 7h	5	5	6	34	8
		over 7h	1	0	0	4	2
	Learn hour during COVID	under 4h	3	7	28	81	10
		from 4 to 7h	5	4	15	43	13
		over 7h	5	2	3	14	6
Not public	Learn hour before COVID	under 4h	0	0	3	8	1
		from 4 to 7h	0	0	0	2	1
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	0	2	6	1
		from 4 to 7h	0	0	1	4	0
		over 7h	0	0	0	0	1

Table 17. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (Because my siblings show me that it is necessary)

Because my siblings show me that it is necessary			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	18	14	41	38	15
		from 4 to 7h	4	1	8	13	6
		over 7h	0	2	2	3	1
	Learn hour during COVID	under 4h	10	12	31	26	12
		from 4 to 7h	11	3	17	19	5
		over 7h	1	2	3	9	5
Female	Learn hour before COVID	under 4h	15	17	46	83	13
		from 4 to 7h	7	10	12	25	4
		over 7h	1	1	1	3	1
	Learn hour during COVID	under 4h	7	15	35	63	9
		from 4 to 7h	8	9	15	41	7
		over 7h	8	4	9	7	2
Not public	Learn hour before COVID	under 4h	0	1	6	5	0
		from 4 to 7h	1	0	1	1	0
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	0	5	4	0
		from 4 to 7h	1	1	1	2	0
		over 7h	0	0	1	0	0

Table 18. Descriptive statistics of the number of student's learning behavior (before and during COVID-19) based on student's perception about self-learning (Because my friends show me that it is necessary)

Because my friends show me that it is necessary			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour before COVID	under 4h	18	15	45	33	15
		from 4 to 7h	4	2	11	11	4
		over 7h	0	0	2	4	2
	Learn hour during COVID	under 4h	12	13	31	23	12
		from 4 to 7h	9	4	20	19	3
		over 7h	1	0	7	6	6
Female	Learn hour before COVID	under 4h	16	22	47	75	14
		from 4 to 7h	4	9	16	26	3
		over 7h	1	1	1	3	1
	Learn hour during COVID	under 4h	6	19	35	59	10
		from 4 to 7h	8	9	24	33	6
		over 7h	7	4	5	12	2
Not public	Learn hour before COVID	under 4h	0	1	3	7	1
		from 4 to 7h	0	0	1	1	1
		over 7h	0	0	0	0	0
	Learn hour during COVID	under 4h	0	1	2	6	0
		from 4 to 7h	0	0	1	2	2
		over 7h	0	0	1	0	0

The descriptive statistic of the student's learning hours during school suspension and the different factors that support their learning are presented in Table 19, Table 20, Table 21, Table 22, Table 23, Table 24, and Table 25. The bar charts in figures 19 to 25 visualize those data respectively.

Table 19. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (My individual motivation toward learning)

My individual motivation toward learning			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	11	9	35	31	5
		from 4 to 7h	3	2	13	25	12
		over 7h	0	1	2	10	7
Female	Learn hour during COVID	under 4h	6	15	47	56	5
		from 4 to 7h	2	5	25	41	7
		over 7h	3	0	5	15	7
Not public	Learn hour	under 4h	0	4	3	1	1
		from 4 to 7h	0	1	1	3	0

			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	during COVID	over 7h	0	0	0	0	1

Table 20. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (My concentration skill)

My concentration skill			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	9	9	36	33	4
		from 4 to 7h	4	6	17	24	4
		over 7h	0	0	7	5	8
Female	Learn hour during COVID	under 4h	5	18	52	47	7
		from 4 to 7h	2	8	21	44	5
		over 7h	2	1	7	13	7
Not public	Learn hour during COVID	under 4h	0	3	4	1	1
		from 4 to 7h	0	2	2	1	0
		over 7h	0	0	0	1	0

Table 21. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (Encouragement and support from my family)

Encouragement and support from my family			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	12	11	18	40	10
		from 4 to 7h	3	12	5	26	9
		over 7h	0	1	3	9	7
Female	Learn hour during COVID	under 4h	5	26	36	57	5
		from 4 to 7h	5	10	16	41	8
		over 7h	4	9	5	9	3
Not public	Learn hour during COVID	under 4h	0	2	4	3	0
		from 4 to 7h	0	0	0	4	1
		over 7h	0	0	0	1	0

Table 22. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (Effective learning space)

Effective learning space			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	10	7	27	38	9
		from 4 to 7h	4	5	19	11	16
		over 7h	1	2	2	7	8
Female	Learn hour during COVID	under 4h	4	14	32	72	7
		from 4 to 7h	3	5	17	45	10
		over 7h	2	2	4	13	9
Not public	Learn hour during COVID	under 4h	1	1	2	3	2
		from 4 to 7h	0	0	1	4	0
		over 7h	0	0	0	1	0

Table 23. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (I set learning target for each day)

I set learning target for each day			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	13	8	41	22	7
		from 4 to 7h	7	3	13	20	12
		over 7h	0	0	5	9	6
Female	Learn hour during COVID	under 4h	6	11	56	49	7
		from 4 to 7h	1	1	19	50	9
		over 7h	2	2	4	12	10
Not public	Learn hour during COVID	under 4h	0	1	5	2	1
		from 4 to 7h	0	0	4	1	0
		over 7h	0	0	0	1	0

Table 24. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (I have proper learning resources)

I have proper learning resources			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	13	4	30	32	12
		from 4 to 7h	4	1	13	20	17
		over 7h	0	0	3	10	7

Female	Learn hour during COVID	under 4h	2	10	36	71	10
		from 4 to 7h	3	3	11	55	8
		over 7h	2	0	4	17	7
Not public	Learn hour during COVID	under 4h	0	0	4	4	1
		from 4 to 7h	0	0	0	3	2
		over 7h	0	0	0	0	1

Table 25. Descriptive statistics of the number of student's learning behavior (during COVID-19) based on factors that support student's learning (I communicate and collaborate with my friend)

I communicate and collaborate with my friend			Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Male	Learn hour during COVID	under 4h	18	15	26	26	6
		from 4 to 7h	5	14	15	9	12
		over 7h	1	0	4	8	7
Female	Learn hour during COVID	under 4h	6	22	42	51	8
		from 4 to 7h	6	14	18	36	6
		over 7h	4	3	7	14	2
Not public	Learn hour during COVID	under 4h	0	0	6	3	0
		from 4 to 7h	0	0	0	2	3
		over 7h	0	0	1	0	0

The total learning hours of students during school closure due to COVID-19 is shown in Figures 1~12, in associated with socioeconomic factors.

Figure 1. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Gender)
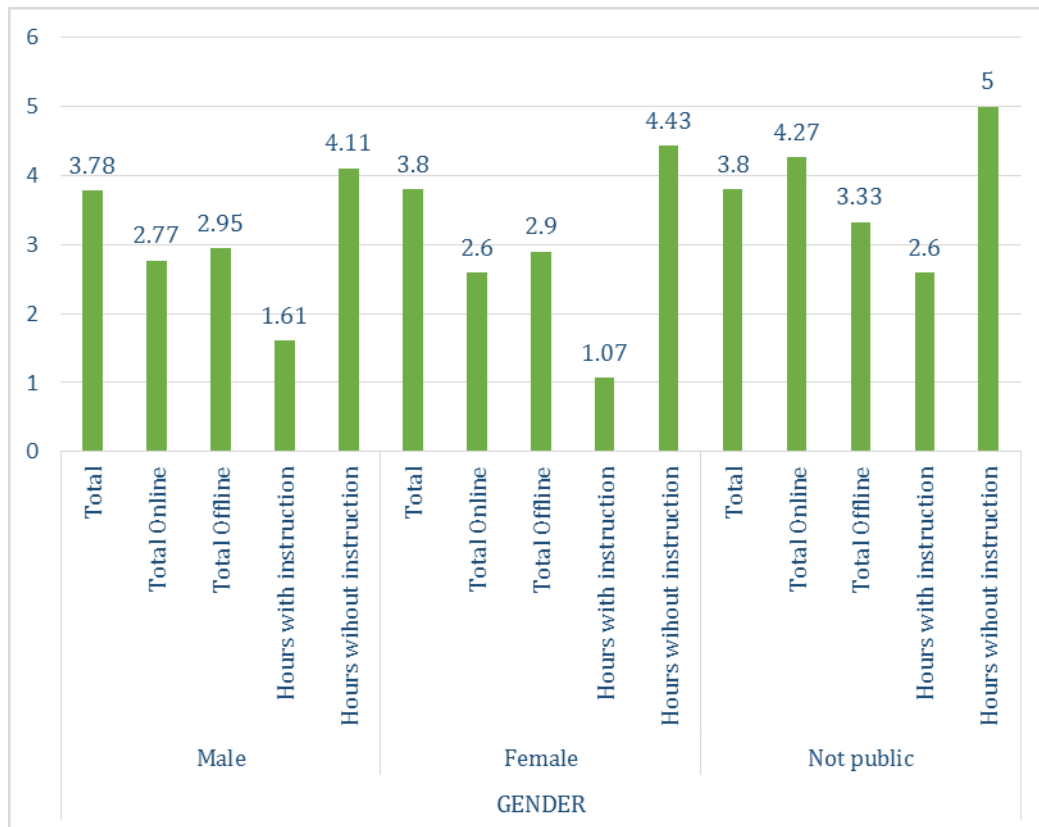
Figure 2. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (School type)
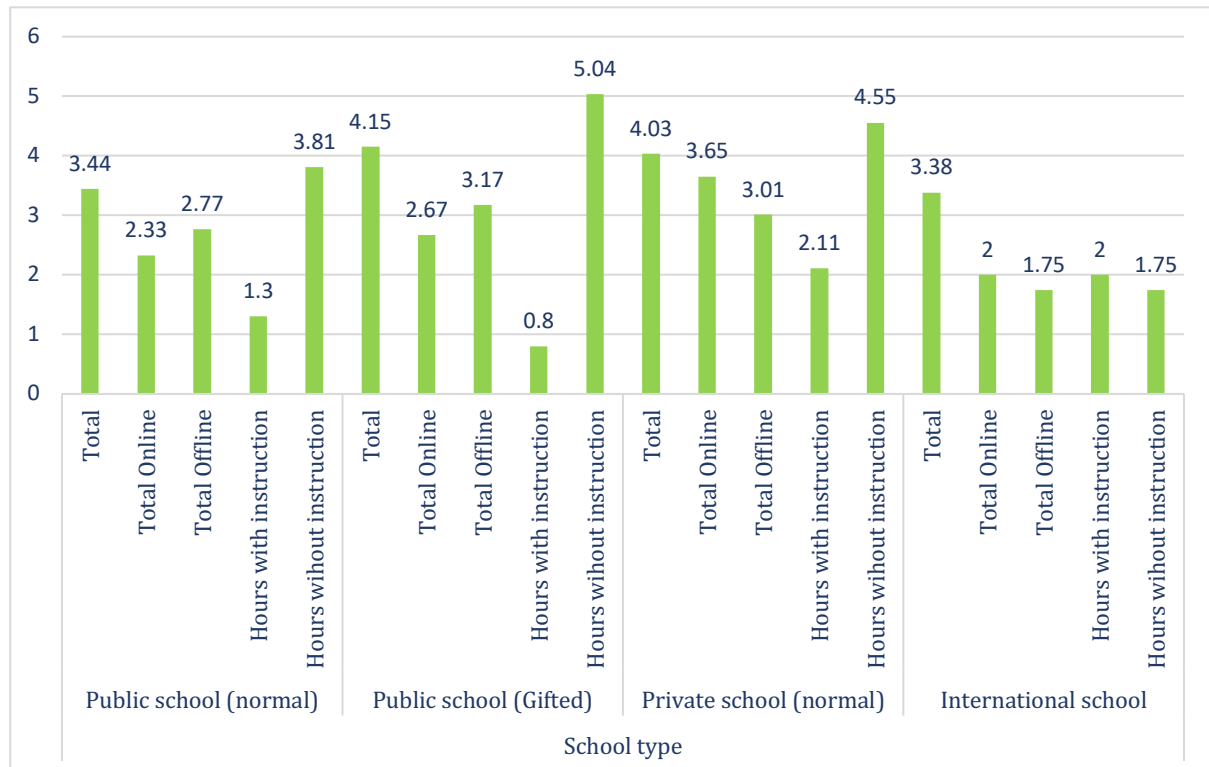
Figure 3. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Grade level)
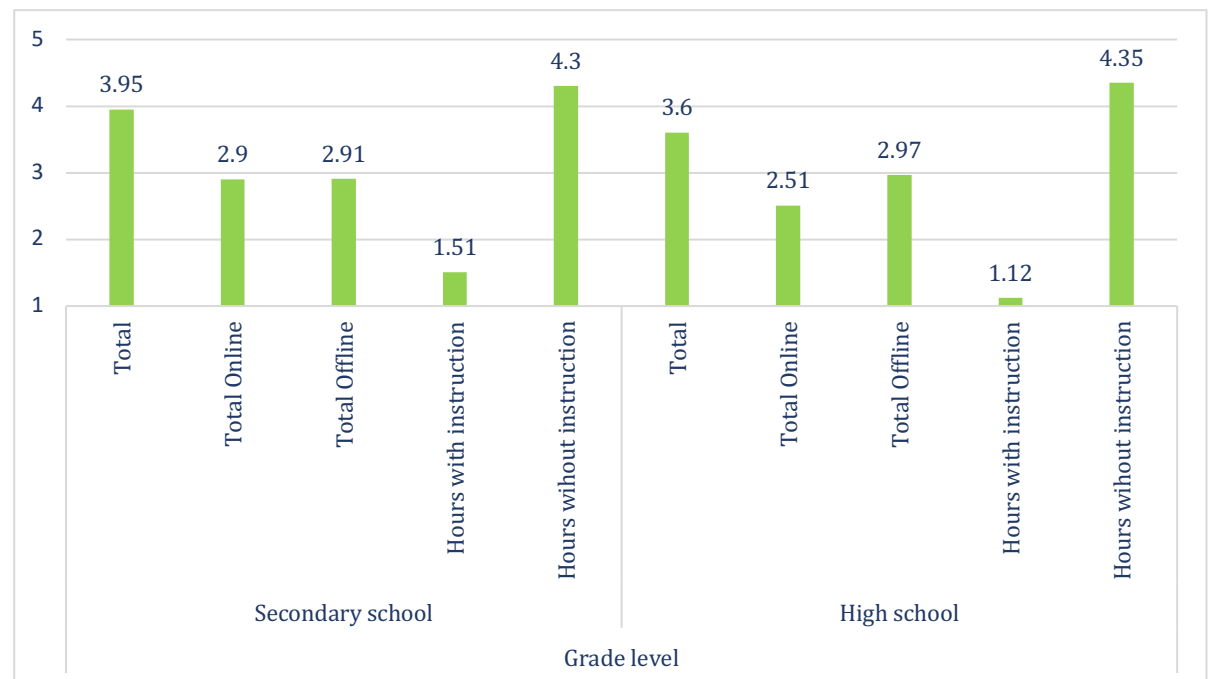
Figure 4. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Family monthly income)
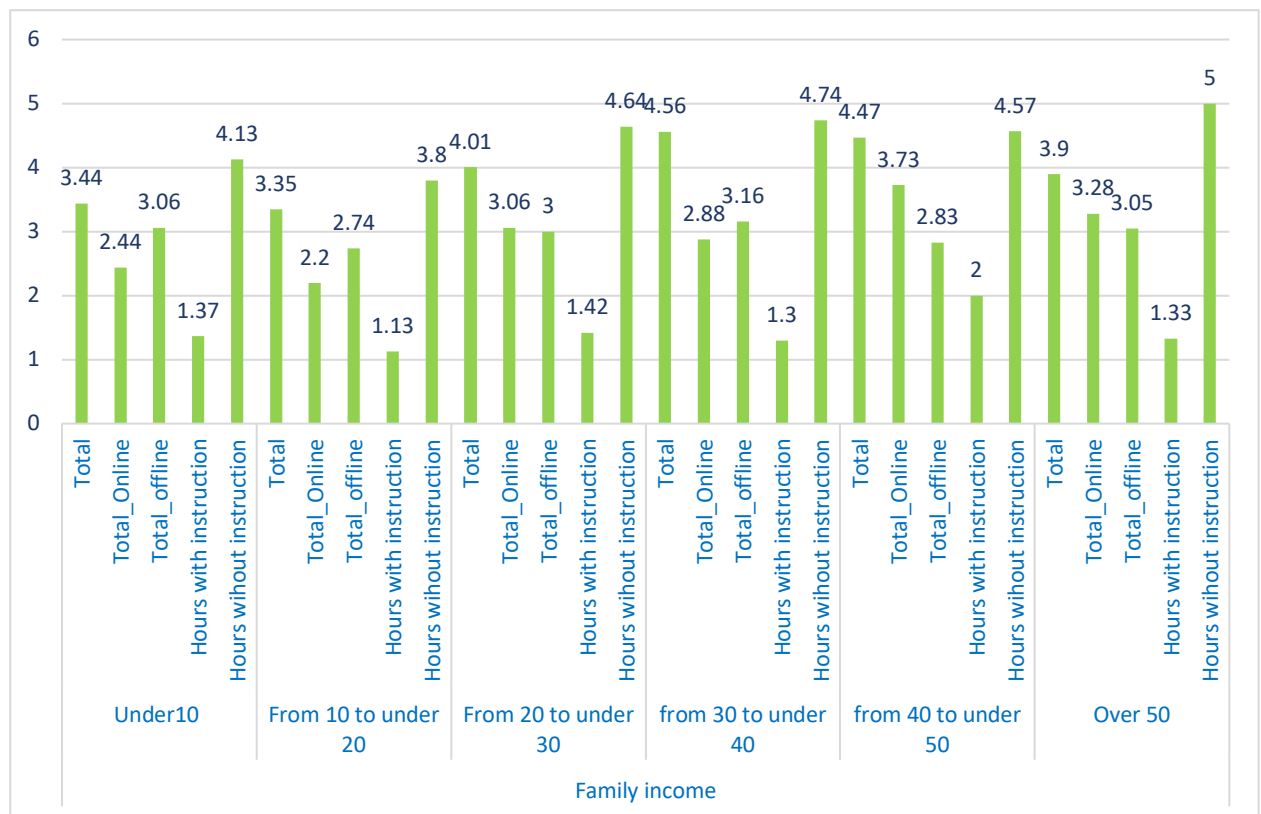
Figure 5. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Siblings)
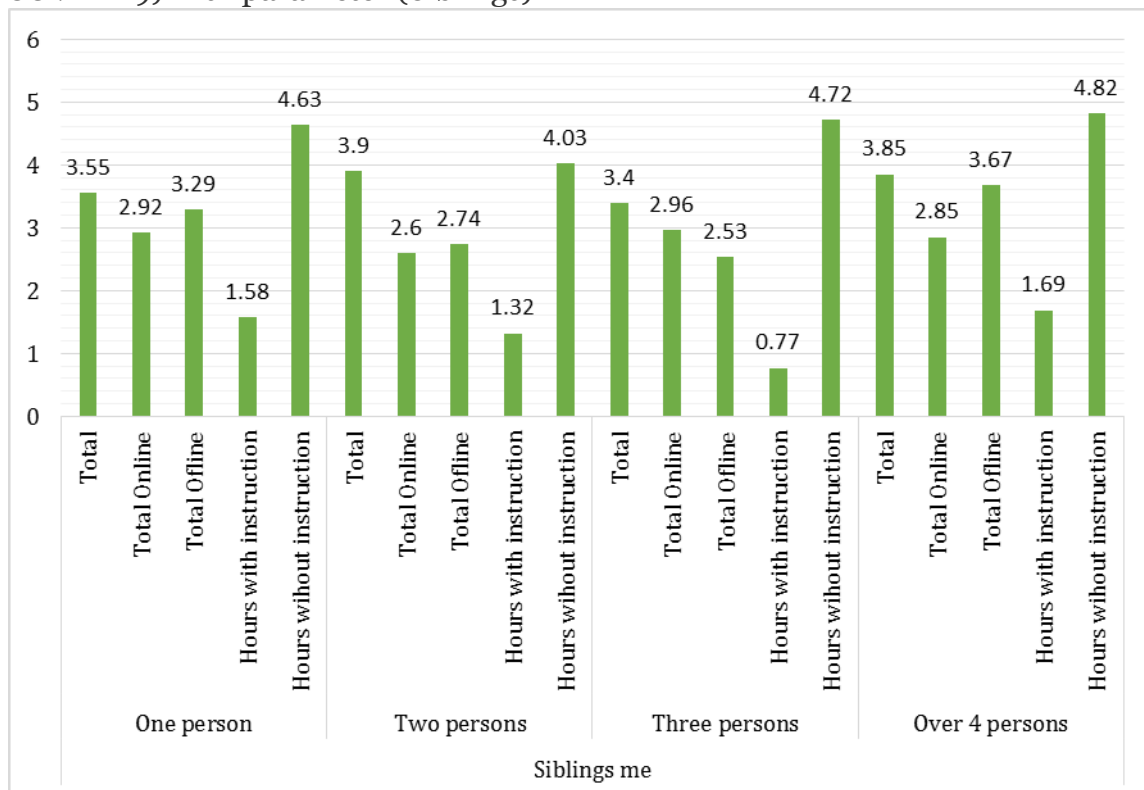
Figure 6. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Father's job)
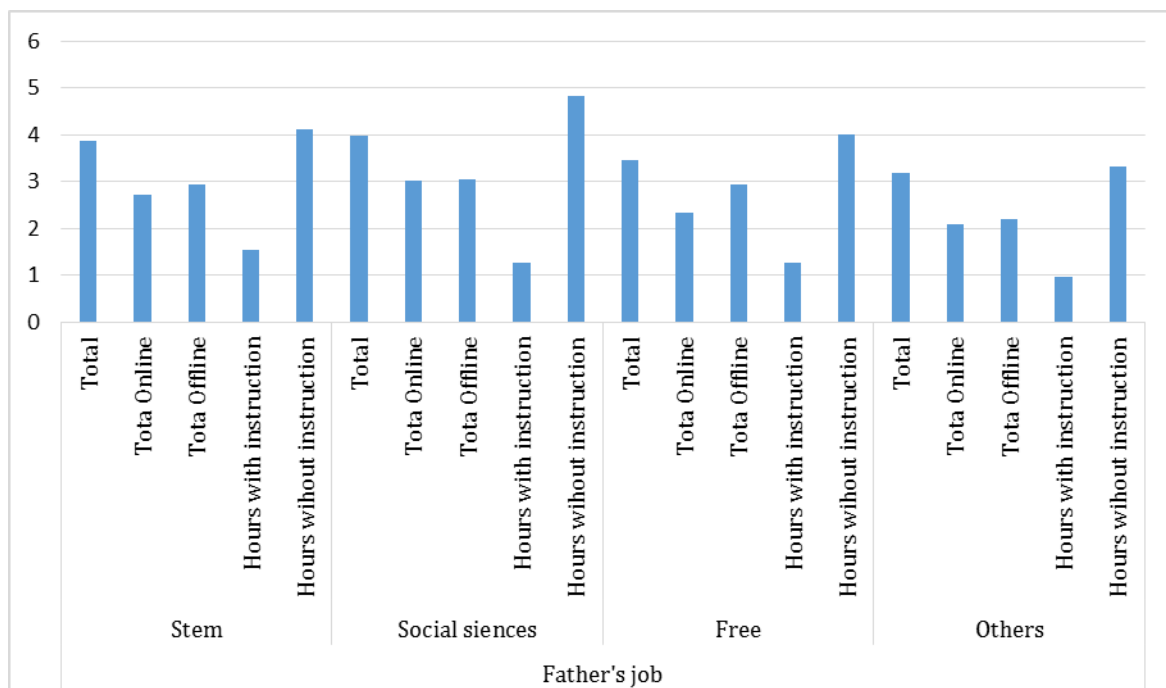
Figure 7. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Mother's job)
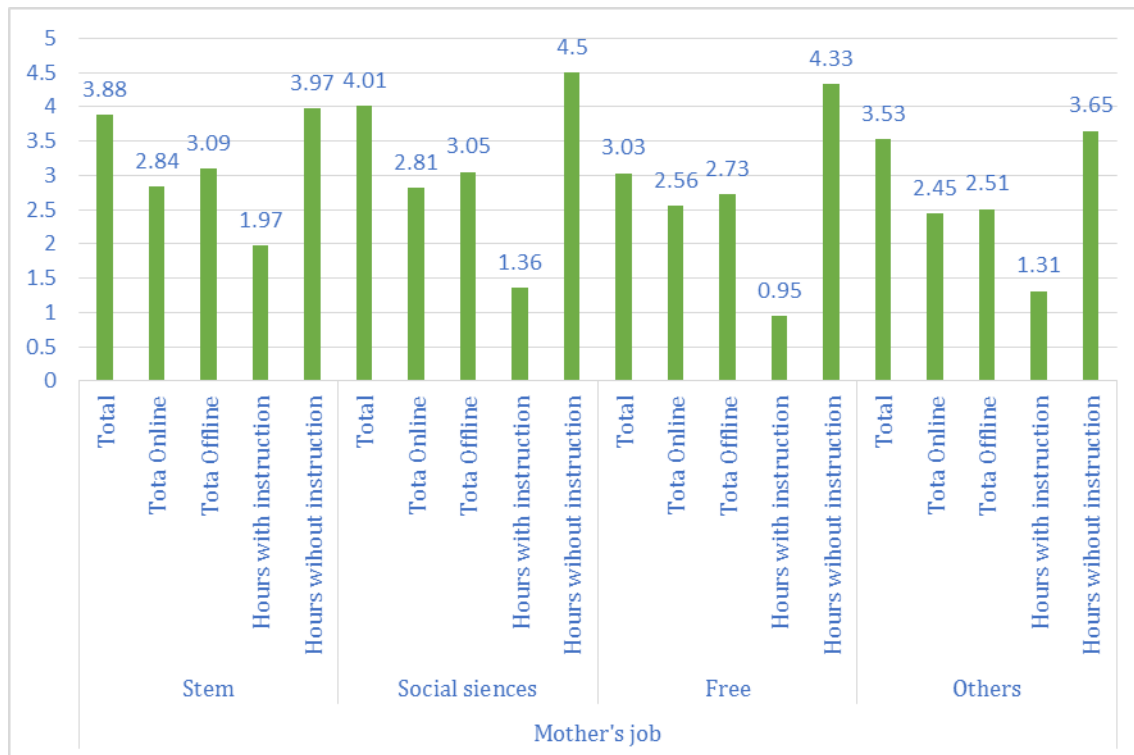
Figure 8. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Occupational Aspiration)
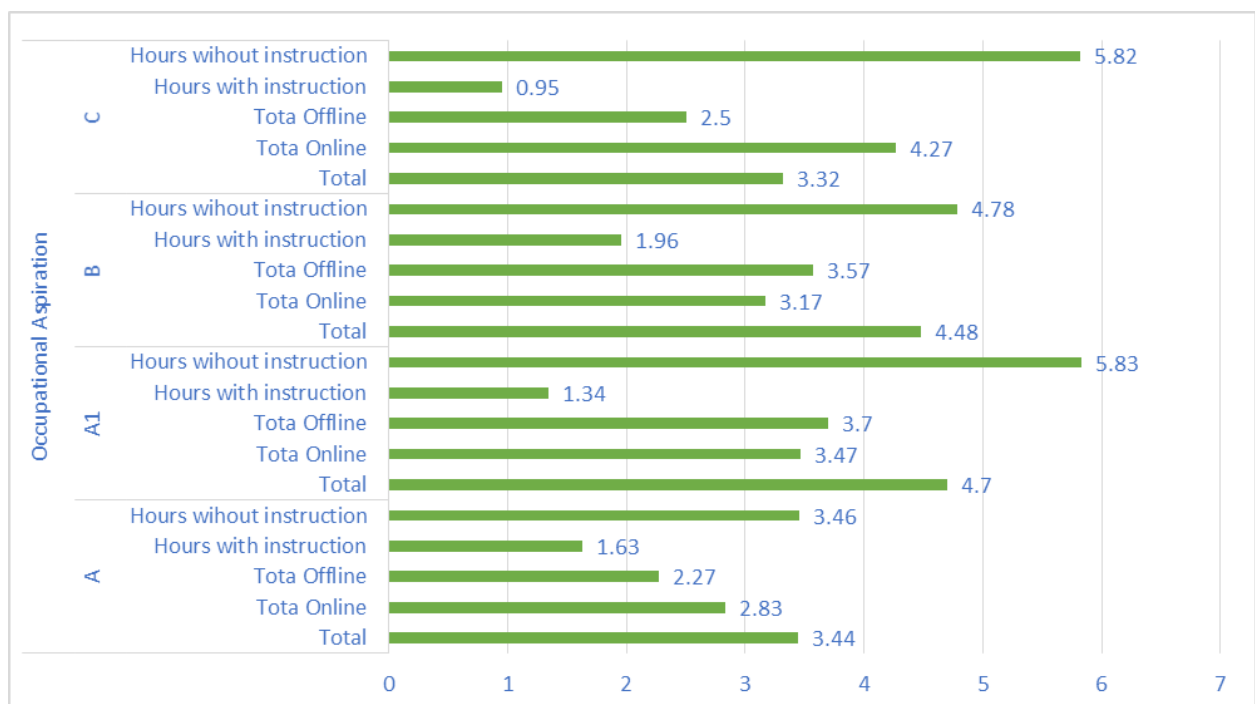
Figure 9. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Learning hours at home before COVID-19)
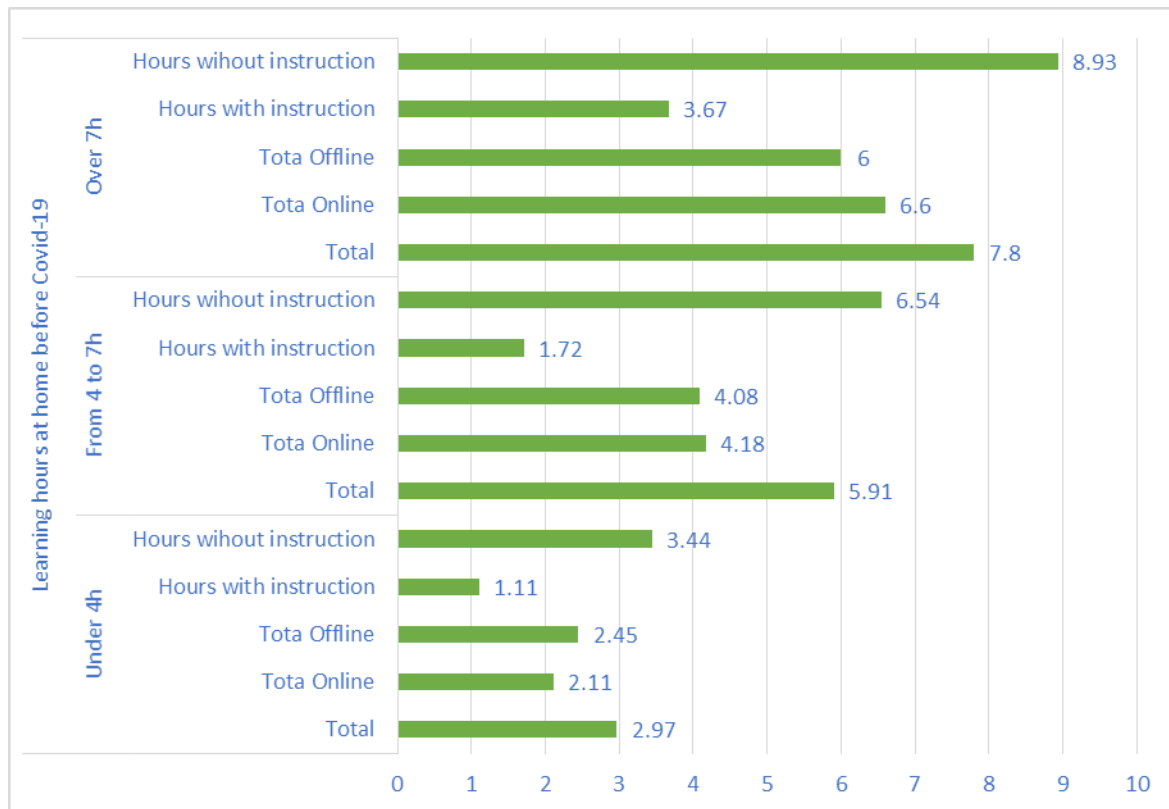
Figure 10. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Self-evaluation on academic performance)
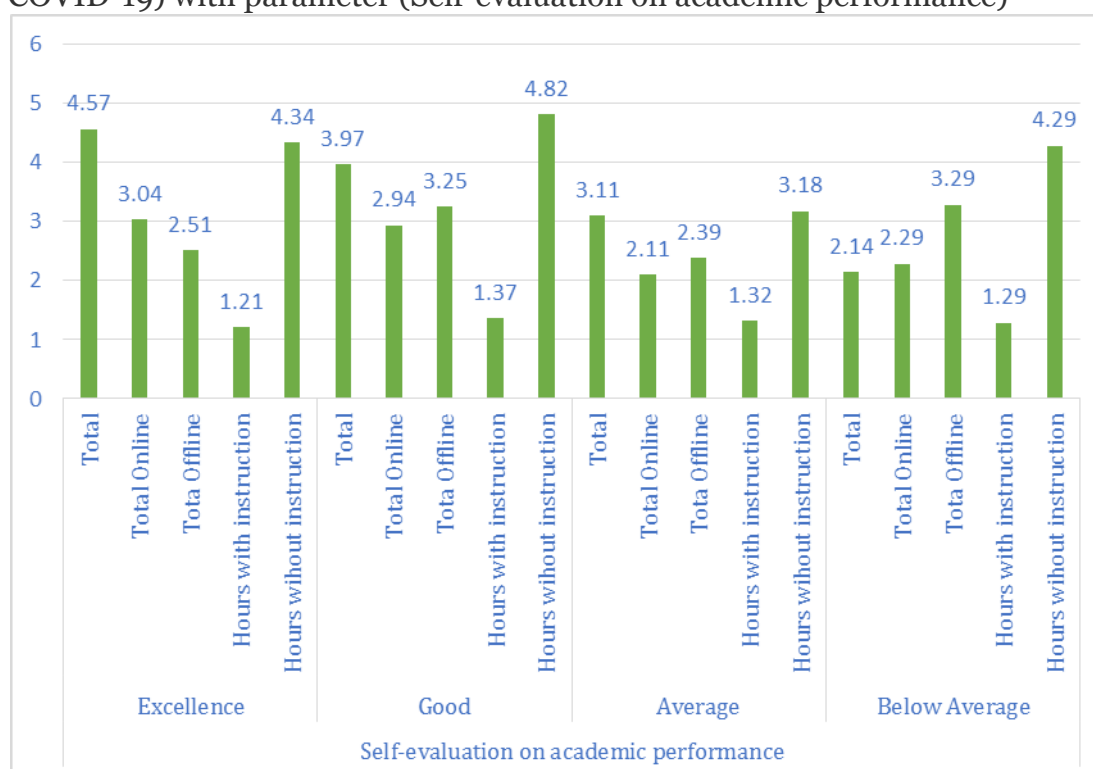
Figure 11. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (English)
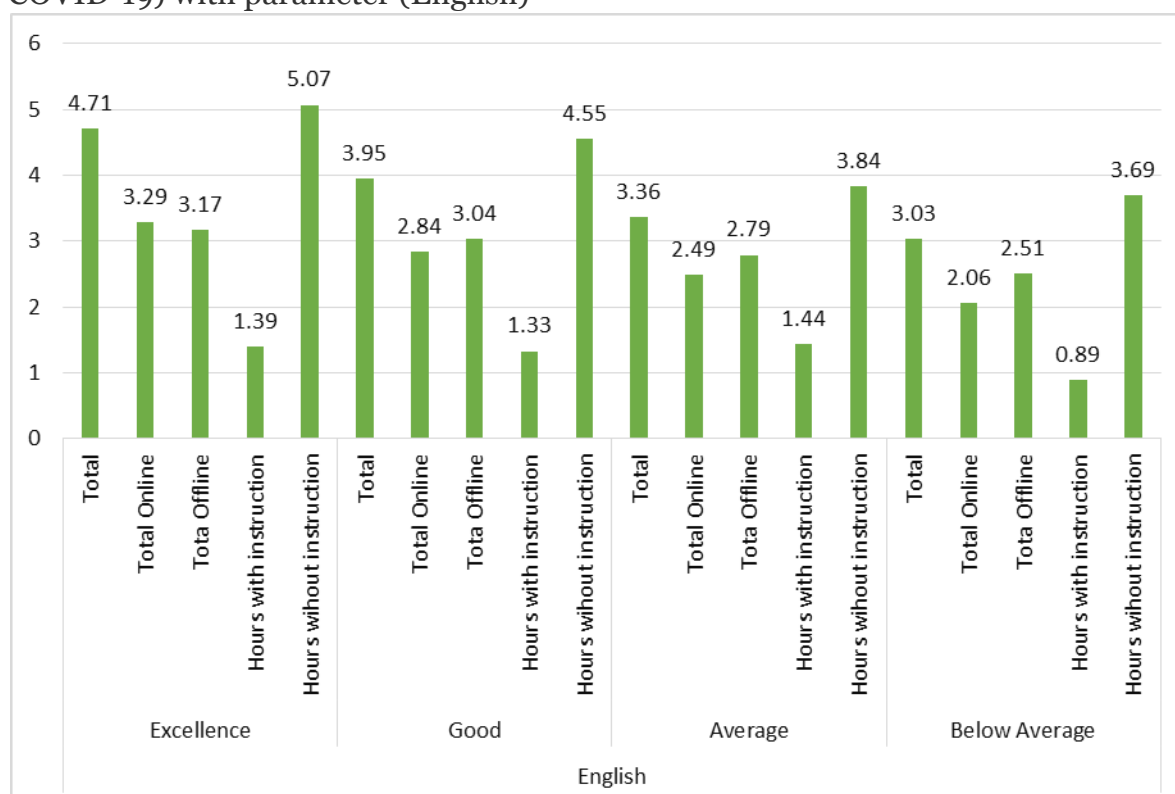
Figure 12. The bar chart presents the number of student's learning behavior (during COVID-19) with parameter (Internet and additional Resources)
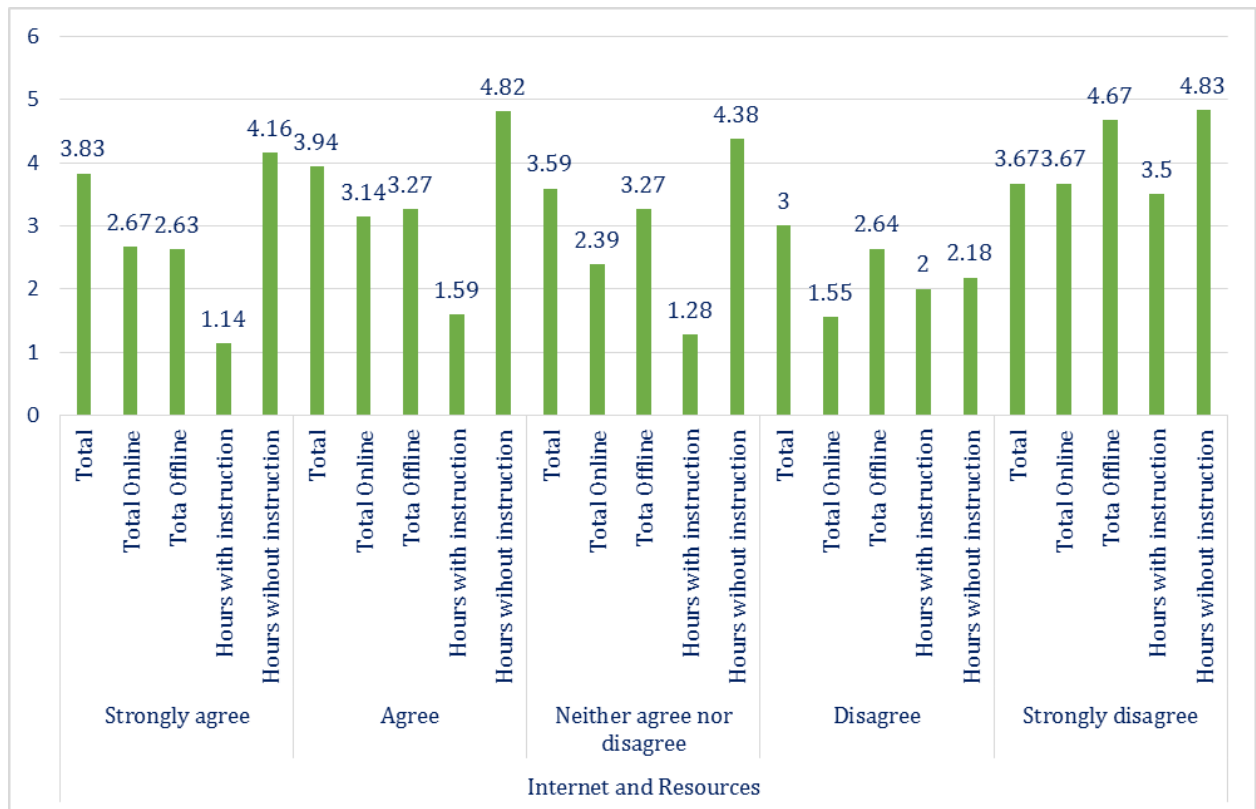
The total learning hours of students before and during school closure due to COVID-19 is shown in Figures 13~18, in associated with student's perceptions about self-learning.
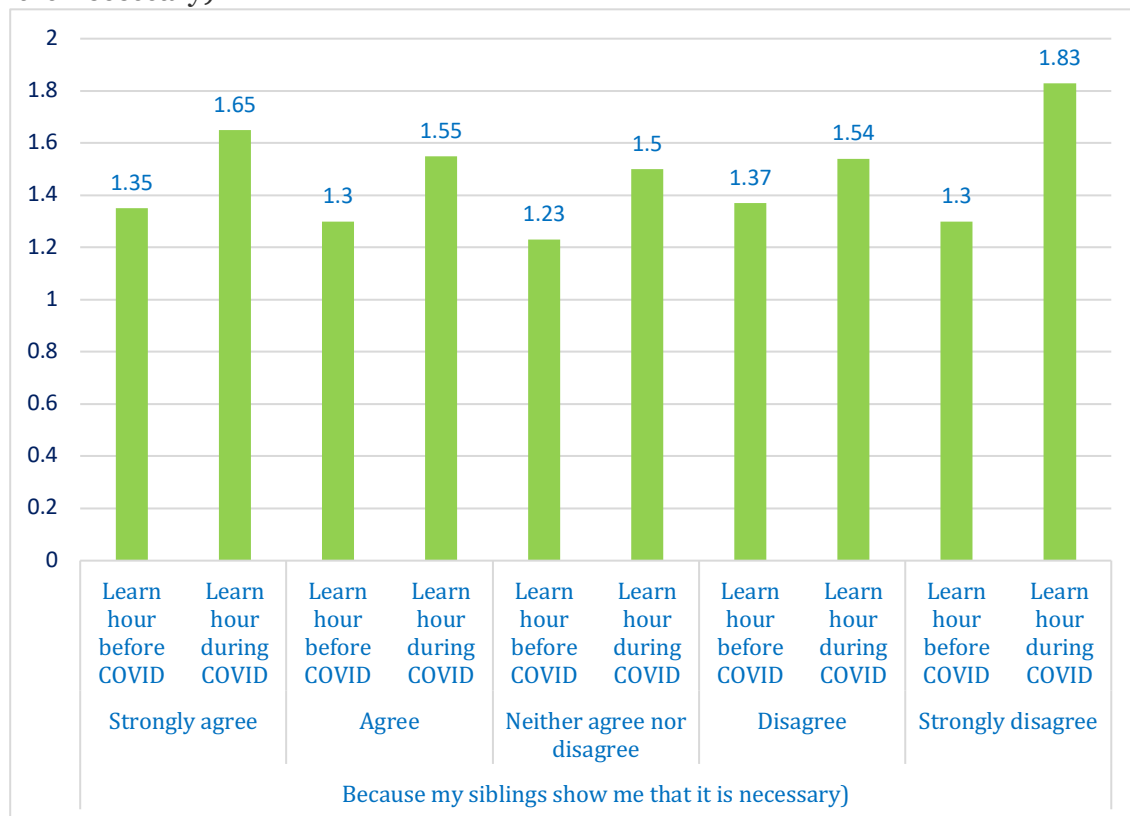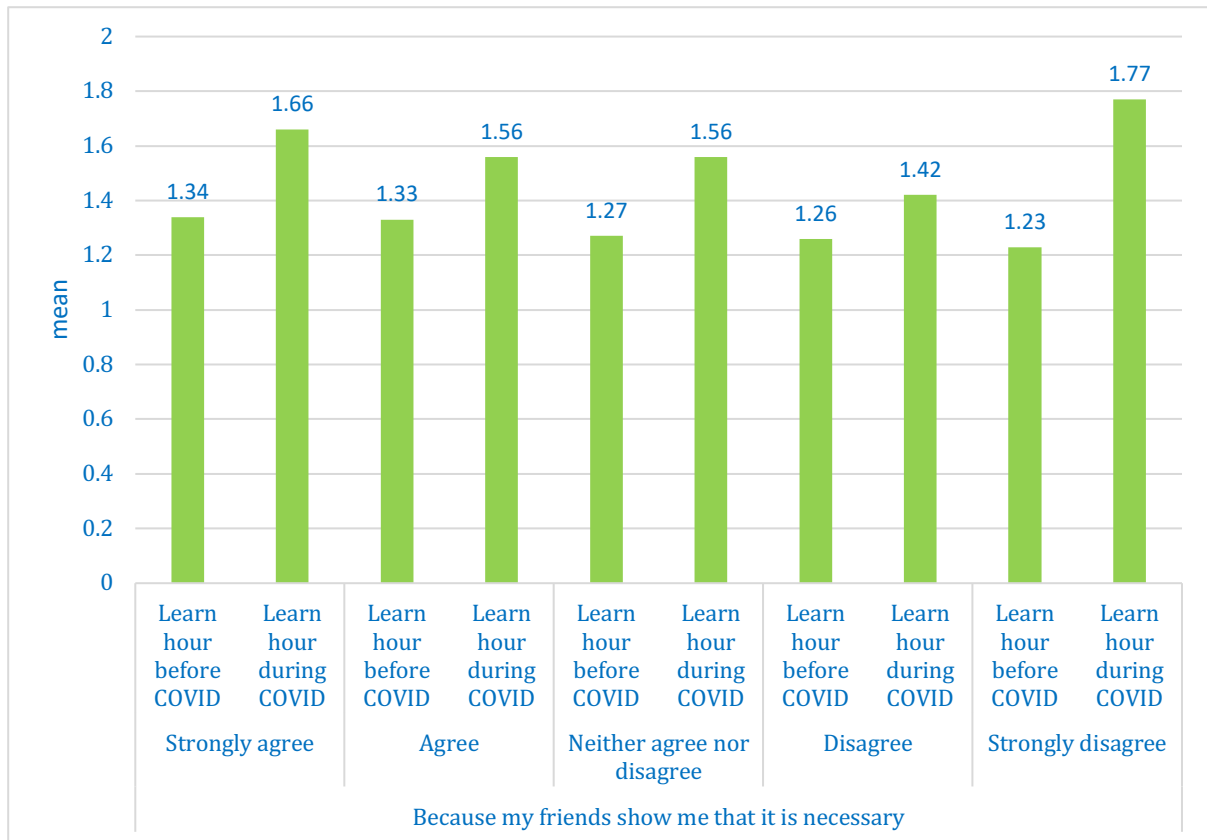
Figure 13. The bar chart show student's learning hours (before and during COVID-19) based on student's perception about self-learning (Self-learning to ensure the academic progress)
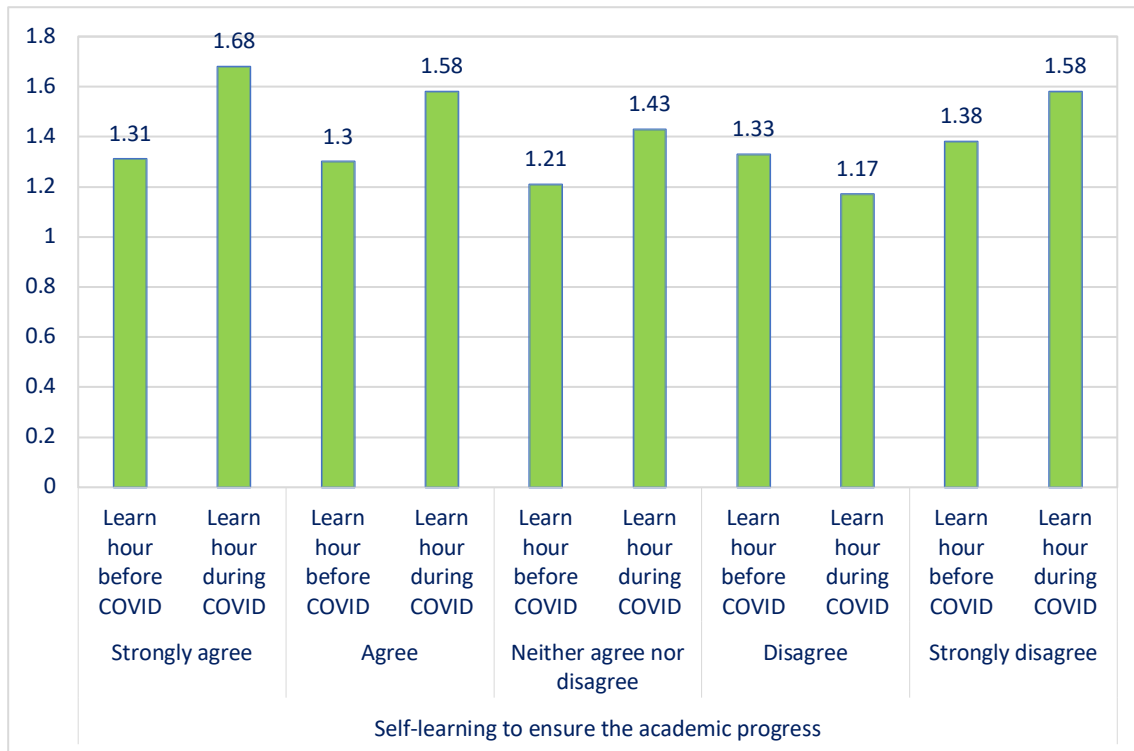
Figure 14. The bar chart show student's learning hours (before and during COVID-19) based on student's perception about self-learning (To maintain learning habit)
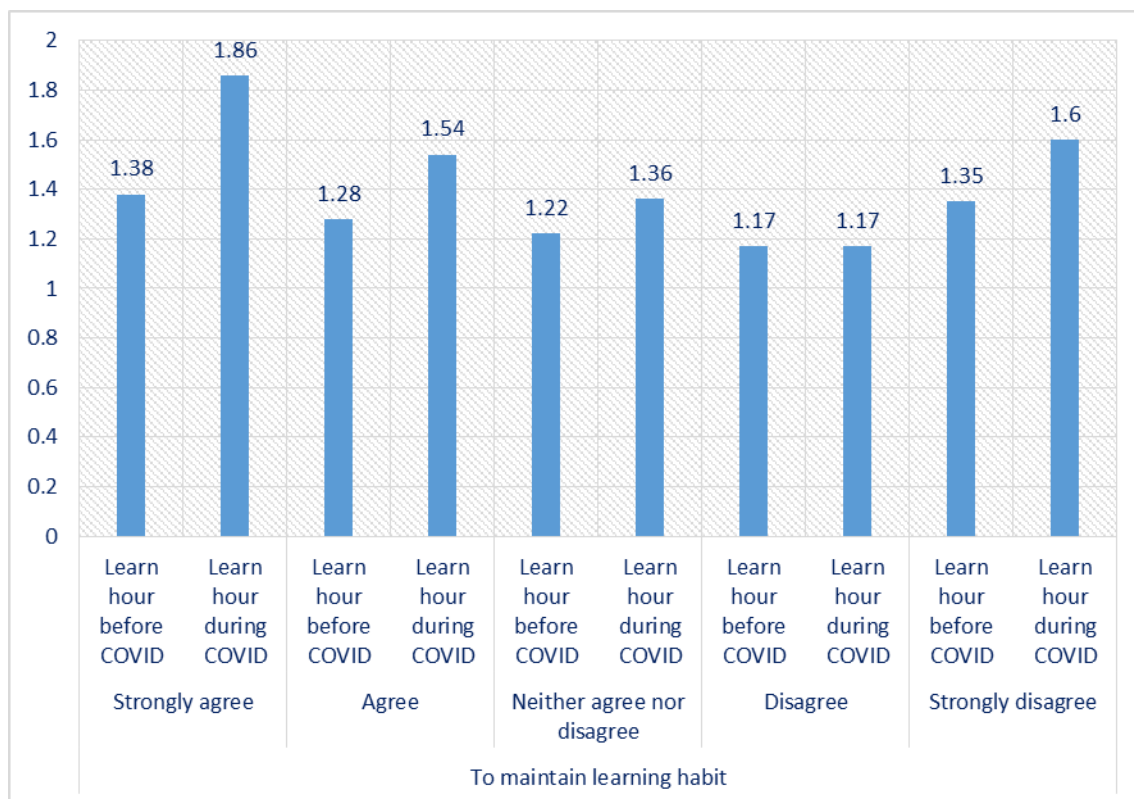
Figure 15. The bar chart show student's learning hours (before and during COVID-19) based on student's perception about self-learning (Because my teachers show me that it is necessary)
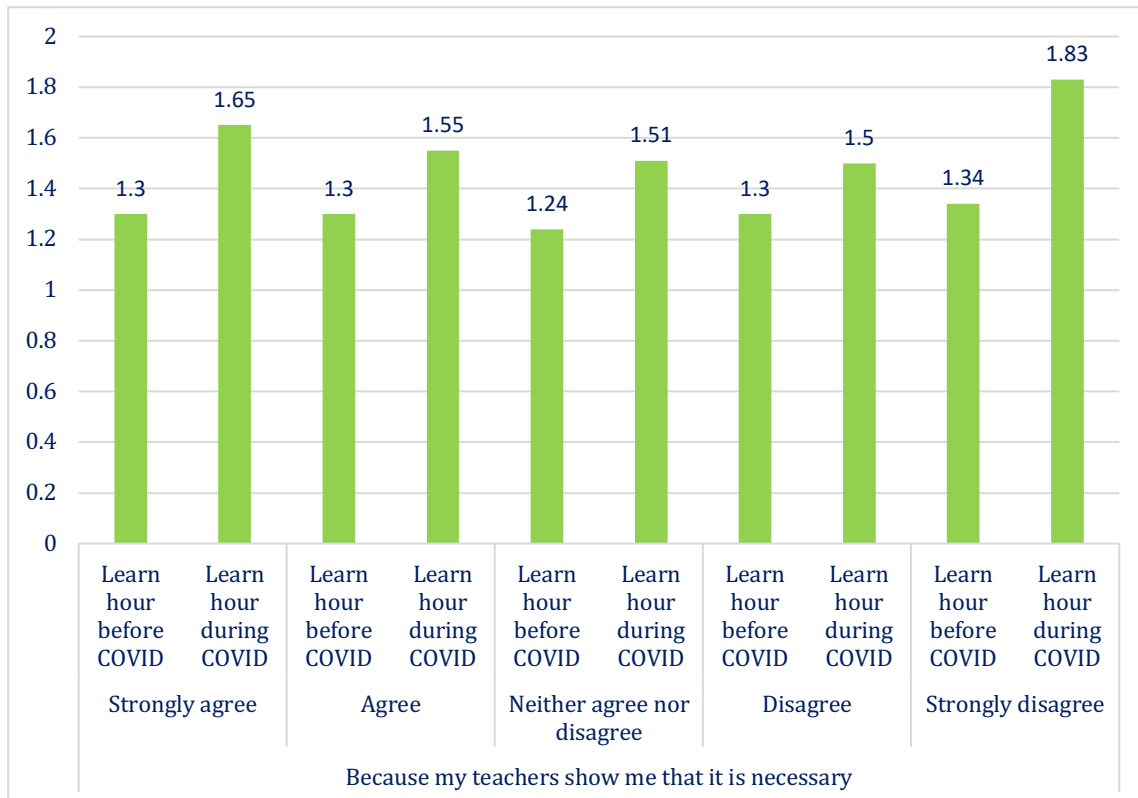
Figure 16. The bar chart show student's learning hours (before and during COVID-19) based on student's perception about self-learning (Because my parents show me that it is necessary)
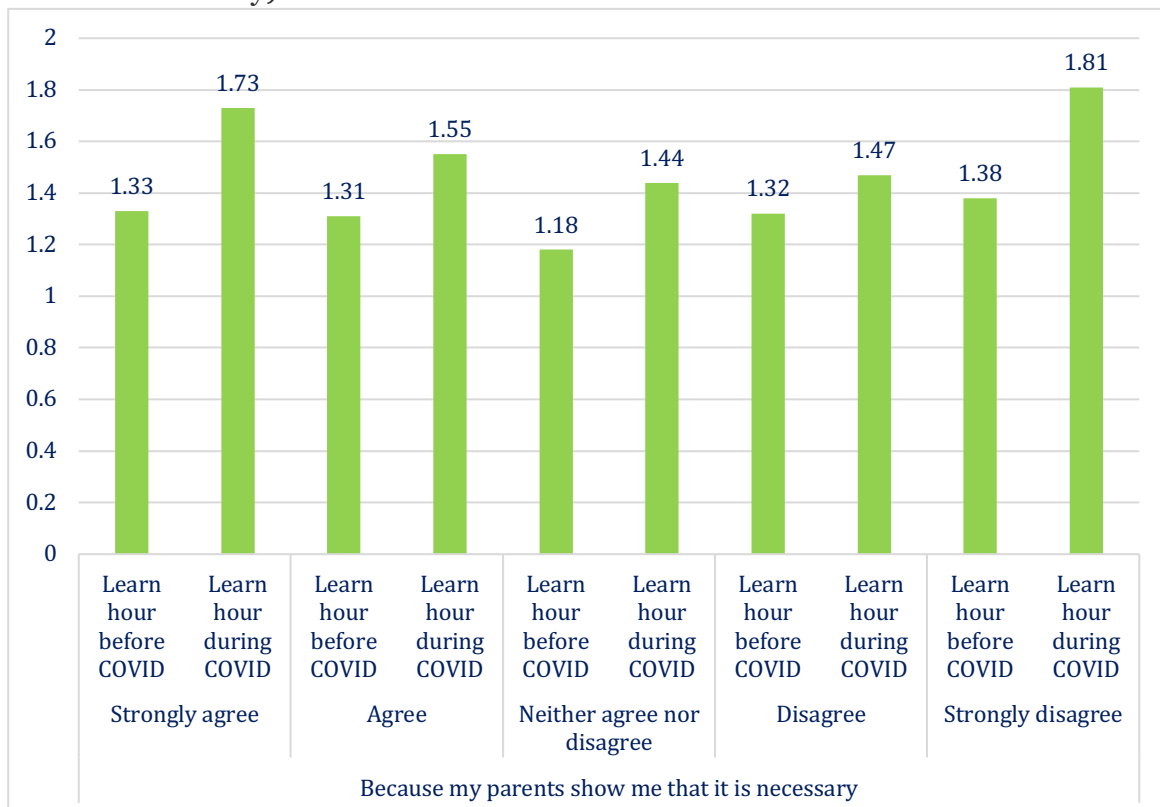
Figure 17. The bar chart show student's learning hours before and during COVID-19) based on student's perception about self-learning (Because my siblings show me that it is necessary)

	Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
	Learn hour before COVID	Learn hour during COVID	Learn hour before COVID	Learn hour during COVID	Learn hour before COVID	Learn hour during COVID	Learn hour before COVID	Learn hour during COVID	Learn hour before COVID	Learn hour during COVID
	1.35	1.65	1.3	1.55	1.23	1.5	1.37	1.54	1.3	1.83

Because my siblings show me that it is necessary)

Figure 18. The bar chart show student's learning hours (before and during COVID-19) based on student's perception about self-learning (Because my friends show me that it is necessary)

The total learning hours of students during school closure due to COVID-19 is shown in Figures 19~25, in associated with factors that support student's learning.
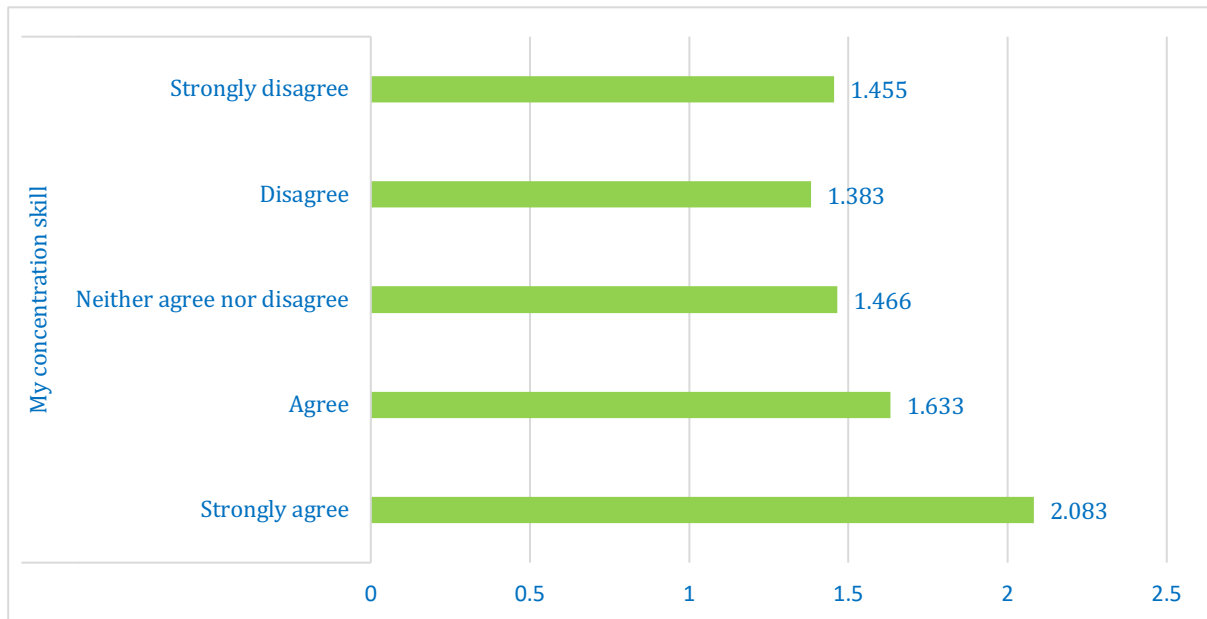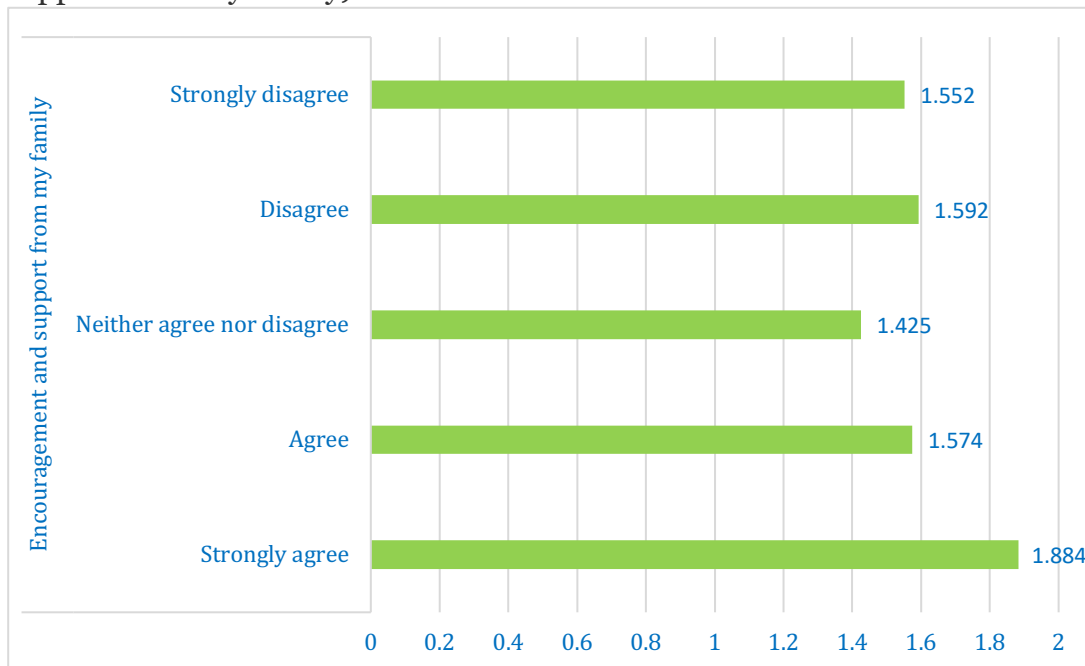
Figure 19. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (My individual motivation toward learning)
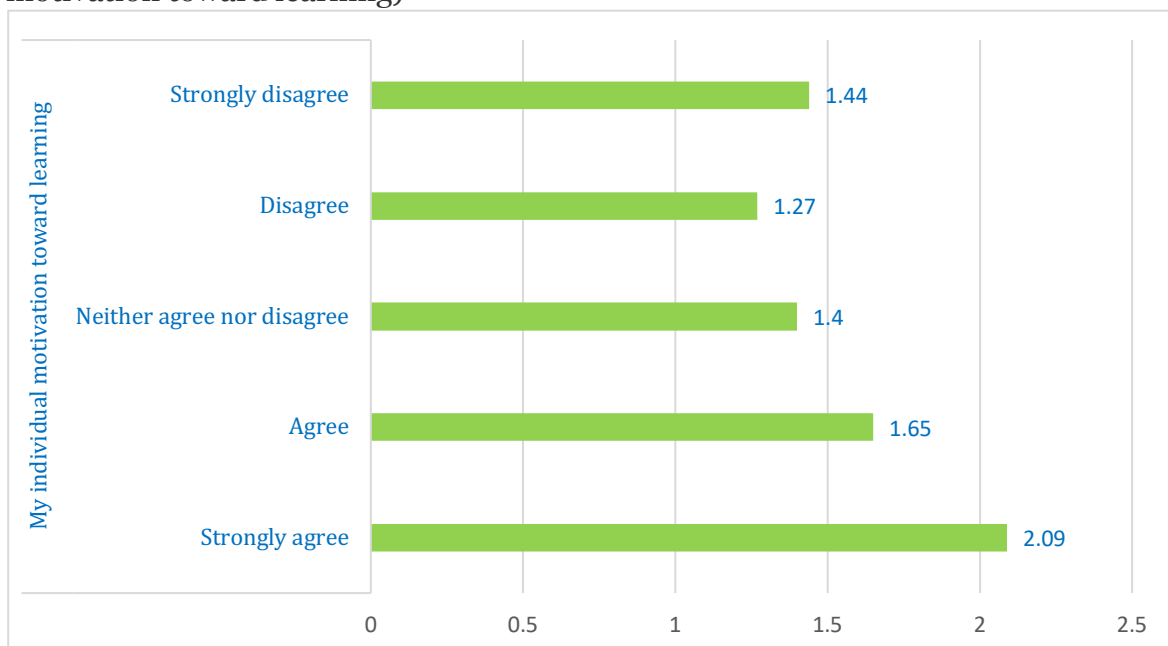
Figure 20. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (My concentration skill)
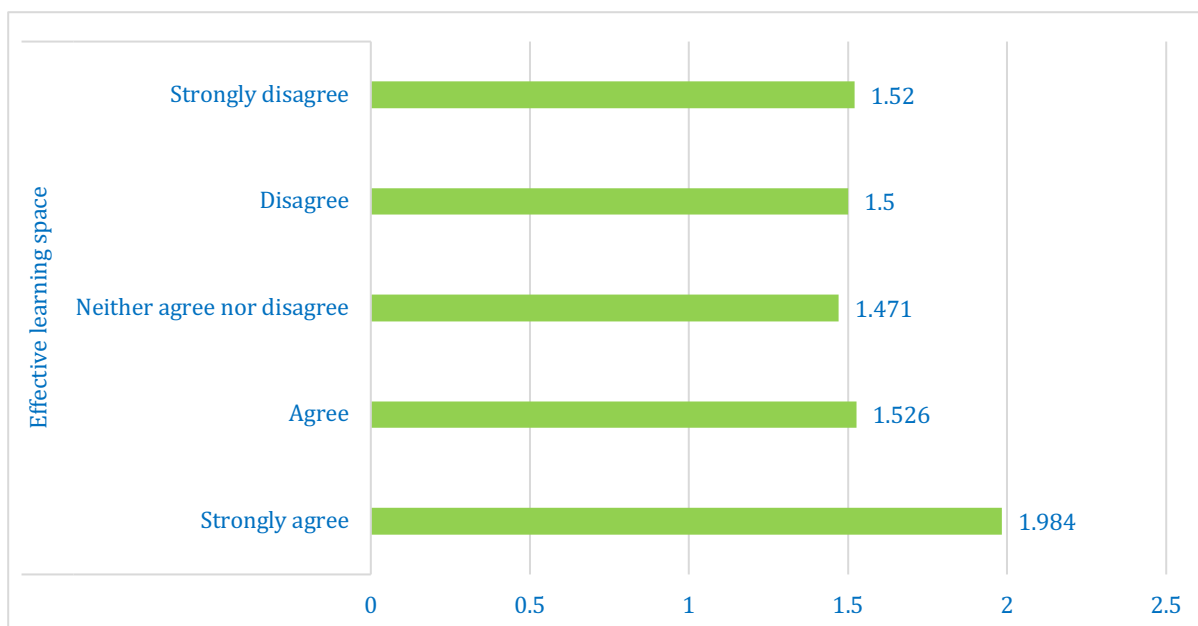

Figure 21. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (Encouragement and support from my family)

Figure 22. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (Effective learning space)

Figure 23. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (I set learning target for each day)
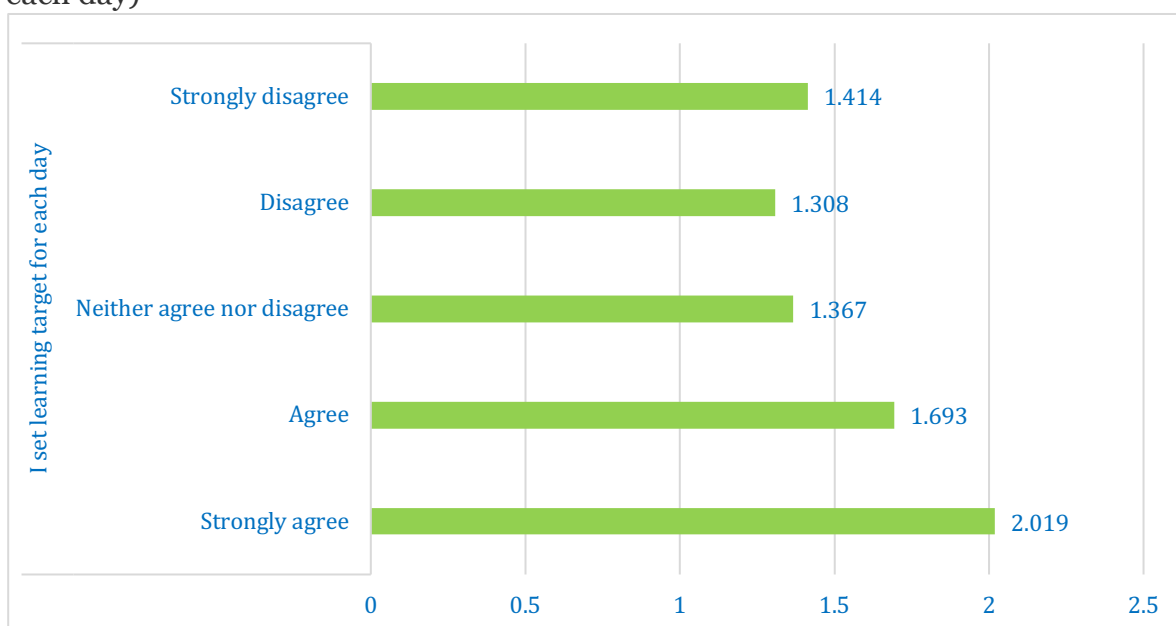

Figure 24. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (I have proper learning resources)
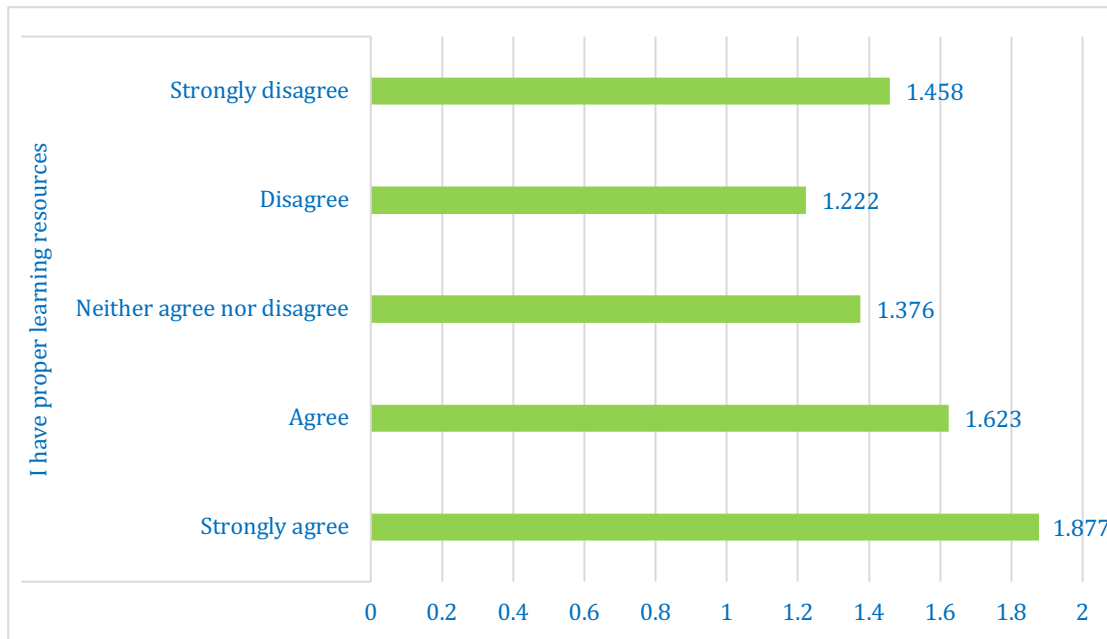
Figure 25. The bar chart shows the number of student's learning hours (during COVID-19) based on factors that support student's learning (I communicate and collaborate with my friend)