

Question : How old are you?
 Location : TQP3-01 (PT2GAGE)

| Country | Sample | Valid N | 1. UNDER 25 % | 2. 25-29 % | 3. 30-39 % | 4. 40-49 % | 5. 50-59 % | 6. 60 OR OLDER % | Not Adminis- tered % | Omitted % |
|-----------------------|--------|---------|---------------------|---------------|---------------|---------------|---------------|---------------------------|-------------------------------|--------------|
| Armenia | 58 | 58 | 5.9 | 2.9 | 17.1 | 36.1 | 31.8 | 6.2 | 0.0 | 0.0 |
| Iran, Islamic Rep. of | 155 | 155 | . | 6.8 | 48.3 | 30.8 | 12.2 | 2.0 | 0.0 | 0.0 |
| Italy | 115 | 114 | . | 2.7 | 13.5 | 37.0 | 41.9 | 4.9 | 0.0 | 1.1 |
| Lebanon | 239 | 235 | . | 2.6 | 17.5 | 22.5 | 35.7 | 21.7 | 0.0 | 1.3 |
| Netherlands | 119 | 112 | . | 3.7 | 16.1 | 16.6 | 46.2 | 17.3 | 5.8 | 0.0 |
| Norway | 129 | 127 | . | 3.5 | 19.7 | 16.5 | 33.6 | 26.8 | 0.4 | 1.0 |
| Russian Federation | 158 | 158 | 2.1 | 3.7 | 17.5 | 30.7 | 31.9 | 14.2 | 0.0 | 0.0 |
| Slovenia | 66 | 66 | . | 7.3 | 14.2 | 36.4 | 39.9 | 2.2 | 0.0 | 0.0 |
| Sweden | 155 | 150 | . | 2.3 | 20.1 | 13.3 | 31.7 | 32.5 | 2.0 | 0.6 |
| International Avg. | 133 | 131 | 4.0 | 4.0 | 20.4 | 26.7 | 33.9 | 14.2 | 0.9 | 0.4 |

Question : How old are you?
 Location : TQP3-01 (PT2GAGE)

| Country | Sample | Valid N | 1.UNDER 25 Mean | 2.25-29 Mean | 3.30-39 Mean | 4.40-49 Mean | 5.50-59 Mean | 6.60 OR OLDER Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------------------|---------------------------------|-----------------|
| Armenia | 58 | 58 | 412.4 | 471.4 | 511.5 | 518.4 | 485.3 | 444.2 | . | . |
| Iran, Islamic Rep. of | 155 | 155 | . | 388.1 | 459.6 | 470.6 | 474.0 | 457.4 | . | . |
| Italy | 115 | 114 | . | 528.5 | 370.7 | 410.6 | 447.9 | 407.8 | . | 270.8 |
| Lebanon | 239 | 235 | . | 448.3 | 437.3 | 439.0 | 445.3 | 448.7 | . | 459.0 |
| Netherlands | 119 | 112 | . | 568.0 | 571.3 | 586.1 | 588.0 | 580.3 | 576.0 | . |
| Norway | 129 | 127 | . | 524.2 | 527.7 | 531.0 | 532.9 | 544.6 | 595.9 | 480.8 |
| Russian Federation | 158 | 158 | 568.9 | 390.8 | 546.7 | 524.8 | 527.9 | 494.4 | . | . |
| Slovenia | 66 | 66 | . | 517.7 | 524.9 | 538.6 | 539.6 | 513.2 | . | . |
| Sweden | 155 | 150 | . | 511.5 | 506.6 | 501.9 | 485.4 | 501.4 | 478.5 | 435.4 |
| International Avg. | 133 | 131 | 490.6 | 483.2 | 495.2 | 502.3 | 502.9 | 488.0 | 550.2 | 411.5 |

Question : Are you female or male?
 Location : TQP3-02 (PT2GSEX)

| Country | Sample | Valid N | 1.FEMAL | 2.MALE | Not Adminis | Omitted | 1.FEMAL | 2.MALE | Not Adminis | Omitted |
|-----------------------|--------|---------|---------|--------|-------------|---------|---------|--------|-------------|---------|
| | | | E % | % | tered % | % | Mean | Mean | tered Mean | Mean |
| Armenia | 58 | 57 | 86.6 | 13.4 | 0.0 | 2.1 | 491.5 | 512.2 | . | 501.9 |
| Iran, Islamic Rep. of | 155 | 155 | 30.8 | 69.2 | 0.0 | 0.0 | 421.6 | 476.9 | . | . |
| Italy | 115 | 114 | 43.6 | 56.4 | 0.0 | 1.1 | 406.4 | 437.5 | . | 270.8 |
| Lebanon | 239 | 236 | 11.4 | 88.6 | 0.0 | 1.0 | 439.4 | 444.0 | . | 442.7 |
| Netherlands | 119 | 111 | 4.6 | 95.4 | 6.4 | 0.0 | 584.8 | 583.0 | 573.9 | . |
| Norway | 129 | 128 | 10.6 | 89.4 | 0.4 | 0.0 | 548.7 | 532.1 | 595.9 | . |
| Russian Federation | 158 | 157 | 76.8 | 23.2 | 0.0 | 0.8 | 524.1 | 509.8 | . | 580.7 |
| Slovenia | 66 | 66 | 27.4 | 72.6 | 0.0 | 0.0 | 546.4 | 530.6 | . | . |
| Sweden | 155 | 150 | 11.5 | 88.5 | 2.0 | 0.6 | 492.5 | 498.3 | 478.5 | 435.4 |
| International Avg. | 133 | 130 | 33.7 | 66.3 | 1.0 | 0.6 | 495.0 | 502.7 | 549.5 | 446.3 |

Question : By the end of this school year, how many years will you have been teaching altogether?
 Location : TQP3-03A (PT2GTAUT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|------|------|--------|------|------|------|------|
| Armenia | 58 | 55 | 0.0 | 4.8 | 21.4 | 20.0 | 1.0 | 1.0 | 10.0 | 15.0 | 20.0 | 32.0 | 35.0 | 40.0 | 40.0 |
| Iran, Islamic Rep. of | 155 | 149 | 0.0 | 2.8 | 16.7 | 17.0 | 4.0 | 6.0 | 8.0 | 11.0 | 15.0 | 22.0 | 28.0 | 30.0 | 40.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 21.0 | 18.0 | 1.0 | 7.0 | 10.0 | 15.0 | 21.0 | 28.0 | 32.0 | 34.0 | 38.0 |
| Lebanon | 239 | 228 | 0.0 | 4.4 | 26.0 | 34.0 | 3.0 | 8.0 | 11.0 | 17.0 | 28.0 | 35.0 | 38.0 | 39.0 | 45.0 |
| Netherlands | 119 | 111 | 5.8 | 0.6 | 24.0 | 33.0 | 2.0 | 5.0 | 7.0 | 13.0 | 27.0 | 33.0 | 36.0 | 37.0 | 41.0 |
| Norway | 129 | 125 | 0.4 | 1.3 | 22.1 | 33.0 | 2.0 | 3.0 | 4.0 | 10.0 | 25.0 | 33.0 | 36.0 | 40.0 | 43.0 |
| Russian Federation | 158 | 156 | 0.0 | 1.3 | 23.6 | 25.0 | 2.0 | 8.0 | 12.0 | 16.0 | 24.0 | 31.0 | 38.0 | 41.0 | 54.0 |
| Slovenia | 66 | 62 | 0.0 | 6.0 | 19.5 | 19.0 | 1.0 | 3.0 | 5.0 | 14.0 | 20.0 | 27.0 | 30.0 | 34.0 | 38.0 |
| Sweden | 155 | 149 | 2.0 | 1.1 | 23.6 | 36.0 | 1.0 | 5.0 | 6.0 | 11.0 | 25.0 | 35.0 | 38.0 | 39.0 | 41.0 |
| International Avg. | 133 | 128 | 0.9 | 2.6 | 22.0 | 26.1 | 1.9 | 5.1 | 8.1 | 13.6 | 22.8 | 30.7 | 34.6 | 37.1 | 42.2 |

Question : How many years will you have taught physics?
 Location : TQP3-03B (PT2PTPHY)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|------|------|--------|------|------|------|------|
| Armenia | 58 | 52 | 0.0 | 13.5 | 21.8 | 15.0 | 1.0 | 6.0 | 10.0 | 15.0 | 20.0 | 33.0 | 35.0 | 40.0 | 40.0 |
| Iran, Islamic Rep. of | 155 | 149 | 0.0 | 3.9 | 15.3 | 17.0 | 2.0 | 6.0 | 7.0 | 10.0 | 14.0 | 19.0 | 25.0 | 30.0 | 38.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 11.4 | 10.0 | 1.0 | 2.0 | 3.0 | 7.0 | 10.0 | 15.0 | 21.0 | 25.0 | 38.0 |
| Lebanon | 239 | 230 | 0.0 | 3.7 | 26.1 | 38.0 | 2.0 | 9.0 | 11.0 | 17.0 | 28.0 | 35.0 | 38.0 | 39.0 | 45.0 |
| Netherlands | 119 | 111 | 5.8 | 0.6 | 19.7 | 30.0 | 1.0 | 3.0 | 5.0 | 10.0 | 20.0 | 30.0 | 33.0 | 35.0 | 40.0 |
| Norway | 129 | 125 | 0.4 | 1.3 | 19.0 | 30.0 | 1.0 | 2.0 | 3.0 | 6.0 | 18.0 | 30.0 | 35.0 | 38.0 | 43.0 |
| Russian Federation | 158 | 152 | 0.0 | 3.8 | 9.3 | 5.0 | 0.0 | 1.0 | 2.0 | 4.0 | 6.0 | 15.0 | 20.0 | 22.0 | 48.0 |
| Slovenia | 66 | 62 | 0.0 | 6.0 | 12.7 | 14.0 | 1.0 | 2.0 | 4.0 | 10.0 | 14.0 | 17.0 | 19.0 | 20.0 | 22.0 |
| Sweden | 155 | 149 | 2.0 | 1.1 | 20.9 | 10.0 | 1.0 | 3.0 | 4.0 | 10.0 | 23.0 | 32.0 | 37.0 | 38.0 | 41.0 |
| International Avg. | 133 | 127 | 0.9 | 3.9 | 17.4 | 18.8 | 1.1 | 3.8 | 5.4 | 9.9 | 17.0 | 25.1 | 29.2 | 31.9 | 39.4 |

Question : How long do you plan to continue teaching physics?
Location : TQP3-04 (PT2PPCTP)

| Country | Sample | Valid N | 1.AS LONG AS I | 2.UNTIL BETTER JOB | 3.FOR A WHILE % | 4.UNDEC IDED % | Not Adminis tered % | Omitted % | 1.AS LONG AS I | 2.UNTIL BETTER JOB | 3.FOR A WHILE Mean | 4.UNDEC IDED Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------------|-----------------------|----------------------|------------------------------|--------------|----------------------|--------------------------|--------------------------|-------------------------|---------------------------------|-----------------|
| | | | CAN % | % | % | % | % | % | CAN Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 56 | 86.1 | 12.3 | . | 1.6 | 0.0 | 5.1 | 492.3 | 539.6 | . | 472.0 | . | 432.6 |
| Iran, Islamic Rep. of | 155 | 155 | 82.9 | 9.5 | 3.3 | 4.3 | 0.0 | 0.0 | 463.1 | 424.3 | 423.4 | 502.8 | . | . |
| Italy | 115 | 114 | 83.6 | 11.6 | 1.8 | 3.0 | 0.0 | 1.1 | 421.8 | 419.4 | 447.7 | 485.0 | . | 270.8 |
| Lebanon | 239 | 230 | 81.1 | 6.8 | 4.1 | 8.1 | 0.0 | 3.9 | 447.5 | 437.0 | 405.1 | 449.4 | . | 400.2 |
| Netherlands | 119 | 109 | 79.0 | 8.1 | 4.4 | 8.6 | 8.9 | 0.0 | 584.6 | 578.0 | 563.1 | 583.6 | 576.7 | . |
| Norway | 129 | 125 | 75.0 | 2.5 | 4.3 | 18.1 | 0.4 | 1.9 | 533.6 | 510.1 | 519.4 | 540.9 | 595.9 | 540.8 |
| Russian Federation | 158 | 157 | 65.0 | 3.5 | 11.4 | 20.1 | 0.0 | 0.4 | 521.8 | 540.5 | 527.9 | 510.6 | . | 593.2 |
| Slovenia | 66 | 64 | 69.3 | 1.2 | 3.0 | 26.6 | 0.0 | 2.8 | 539.7 | 544.0 | 537.0 | 518.6 | . | 564.6 |
| Sweden | 155 | 147 | 73.3 | 1.7 | 4.7 | 20.2 | 2.0 | 2.1 | 497.0 | 467.7 | 497.5 | 503.2 | 478.5 | 475.7 |
| International Avg. | 133 | 129 | 77.3 | 6.3 | 4.6 | 12.3 | 1.2 | 1.9 | 500.2 | 495.6 | 490.1 | 507.3 | 550.4 | 468.3 |

Question : What is the highest level of formal education you have completed?
Location : TQP3-05 (PT2GFEDC)

| Country | Sample | Valid N | 6.FINIS | | | | | | | 6.FINIS | | | | | | | |
|-----------------------|--------|---------|---|-------------------------------------|--------------------------------------|--|---|------------------------------|--------------|--|--|---|---|--|---------------------------------|-----------------|--|
| | | | 1.DID NOT COMPLET E <ISCED 3> % | 2.FINIS HED <ISCED 3> % | 4.FINIS HED <ISCED 5B> % | 5.FINIS HED 5A, 1ST DEGREE> % | 6.FINIS HED <ISCED 5A, 2ND DEGREE> OR HI % | Not Adminis tered % | Omitted % | 1.DID NOT COMPLET E <ISCED 3> Mean | 2.FINIS HED <ISCED 3> Mean | 4.FINIS HED <ISCED 5B> Mean | 5.FINIS HED 5A, 1ST DEGREE> Mean | 6.FINIS HED <ISCED 5A, 2ND DEGREE> OR HI Mean | Not Adminis tered Mean | Omitted Mean | |
| | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| Armenia | 58 | 58 | . | 0.6 | . | 1.2 | 98.2 | 0.0 | 0.0 | . | 543.7 | . | 435.2 | 494.8 | . | . | |
| Iran, Islamic Rep. of | 155 | 155 | . | . | . | 80.1 | 19.9 | 0.0 | 0.0 | . | . | . | 458.0 | 467.2 | . | . | |
| Italy | 115 | 114 | . | . | . | 80.0 | 20.0 | 0.0 | 1.1 | . | . | . | 427.2 | 410.8 | . | 270.8 | |
| Lebanon | 239 | 230 | . | . | 0.3 | 55.8 | 43.9 | 1.3 | 1.6 | . | . | 423.1 | 443.3 | 443.2 | 464.0 | 445.4 | |
| Netherlands | 119 | 111 | . | 1.5 | . | 10.3 | 88.2 | 5.8 | 0.7 | . | 584.2 | . | 580.8 | 583.0 | 576.0 | 603.0 | |
| Norway | 129 | 126 | . | . | . | 12.5 | 87.5 | 0.4 | 1.8 | . | . | . | 529.9 | 534.4 | 595.9 | 535.6 | |
| Russian Federation | 158 | 156 | . | . | . | 21.6 | 78.4 | 0.0 | 0.6 | . | . | . | 529.0 | 519.4 | . | 490.7 | |
| Slovenia | 66 | 66 | . | . | . | . | 100.0 | 0.0 | 0.0 | . | . | . | . | 535.0 | . | . | |
| Sweden | 155 | 150 | 0.5 | . | 0.2 | 56.8 | 42.5 | 2.0 | 0.6 | 525.0 | . | 523.4 | 497.6 | 497.4 | 478.5 | 435.4 | |
| International Avg. | 133 | 130 | 0.5 | 1.0 | 0.3 | 39.8 | 64.3 | 1.1 | 0.7 | 525.0 | 563.9 | 473.2 | 487.6 | 498.3 | 528.6 | 463.5 | |

Question : During your post-secondary education, was physics your main area of study?
 Location : TQP3-06A (PT2GPSPH)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 96.5 | 3.5 | 0.0 | 0.0 | 496.8 | 429.8 | . | . |
| Iran, Islamic Rep. of | 155 | 154 | 92.2 | 7.8 | 0.0 | 1.2 | 459.1 | 465.6 | . | 480.2 |
| Italy | 115 | 114 | 39.9 | 60.1 | 0.0 | 1.1 | 412.9 | 431.2 | . | 270.8 |
| Lebanon | 239 | 231 | 95.1 | 4.9 | 0.0 | 3.1 | 445.0 | 416.3 | . | 442.3 |
| Netherlands | 119 | 111 | 82.1 | 17.9 | 5.8 | 1.1 | 579.7 | 599.0 | 576.0 | 565.8 |
| Norway | 129 | 125 | 95.1 | 4.9 | 0.8 | 1.1 | 532.9 | 554.3 | 555.1 | 536.7 |
| Russian Federation | 158 | 158 | 97.8 | 2.2 | 0.0 | 0.0 | 522.9 | 445.9 | . | . |
| Slovenia | 66 | 66 | 85.9 | 14.1 | 0.0 | 0.0 | 532.6 | 549.2 | . | . |
| Sweden | 155 | 149 | 96.7 | 3.3 | 2.0 | 0.6 | 497.7 | 497.0 | 478.5 | 437.0 |
| International Avg. | 133 | 130 | 86.8 | 13.2 | 1.0 | 0.9 | 497.7 | 487.6 | 536.5 | 455.5 |

Question : During your post-secondary education, was chemistry your main area of study?
Location : TQP3-06B (PT2GPSCH)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 55 | 11.7 | 88.3 | 0.0 | 5.4 | 524.3 | 490.8 | . | 489.4 |
| Iran, Islamic Rep. of | 155 | 154 | 2.3 | 97.7 | 0.0 | 1.2 | 478.5 | 459.2 | . | 480.2 |
| Italy | 115 | 114 | . | 100.0 | 0.0 | 1.1 | . | 423.9 | . | 270.8 |
| Lebanon | 239 | 230 | 14.5 | 85.5 | 0.0 | 3.5 | 443.7 | 442.8 | . | 459.3 |
| Netherlands | 119 | 111 | 10.1 | 89.9 | 5.8 | 1.1 | 594.4 | 581.8 | 576.0 | 565.8 |
| Norway | 129 | 124 | 18.8 | 81.2 | 0.4 | 2.0 | 545.7 | 530.3 | 595.9 | 563.8 |
| Russian Federation | 158 | 158 | 1.3 | 98.7 | 0.0 | 0.0 | 665.0 | 519.4 | . | . |
| Slovenia | 66 | 66 | 3.3 | 96.7 | 0.0 | 0.0 | 542.1 | 534.7 | . | . |
| Sweden | 155 | 149 | 15.9 | 84.1 | 2.0 | 0.6 | 510.4 | 495.3 | 478.5 | 437.0 |
| International Avg. | 133 | 129 | 9.7 | 91.3 | 0.9 | 1.7 | 538.0 | 497.6 | 550.2 | 466.6 |

Question : During your post-secondary education, was biology your main area of study?
Location : TQP3-06C (PT2GPSBI)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 1.8 | 98.2 | 0.0 | 2.3 | 655.6 | 492.2 | . | 466.4 |
| Iran, Islamic Rep. of | 155 | 154 | 0.5 | 99.5 | 0.0 | 1.2 | 648.8 | 458.6 | . | 480.2 |
| Italy | 115 | 114 | . | 100.0 | 0.0 | 1.1 | . | 423.9 | . | 270.8 |
| Lebanon | 239 | 232 | 4.1 | 95.9 | 0.0 | 2.7 | 443.2 | 443.2 | . | 456.1 |
| Netherlands | 119 | 111 | . | 100.0 | 5.8 | 1.1 | . | 583.1 | 576.0 | 565.8 |
| Norway | 129 | 121 | 0.6 | 99.4 | 0.4 | 5.9 | 545.8 | 531.7 | 595.9 | 567.3 |
| Russian Federation | 158 | 158 | 0.8 | 99.2 | 0.0 | 0.0 | 657.5 | 520.1 | . | . |
| Slovenia | 66 | 66 | . | 100.0 | 0.0 | 0.0 | . | 535.0 | . | . |
| Sweden | 155 | 147 | 4.4 | 95.6 | 2.0 | 2.1 | 506.9 | 498.5 | 478.5 | 423.1 |
| International Avg. | 133 | 129 | 2.0 | 98.6 | 0.9 | 1.8 | 576.3 | 498.5 | 550.2 | 461.4 |

Question : During your post-secondary education, was engineering your main area of study?
Location : TQP3-06D (PT2GPSEN)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 4.1 | 95.9 | 0.0 | 2.3 | 613.5 | 490.1 | . | 466.4 |
| Iran, Islamic Rep. of | 155 | 154 | 13.9 | 86.1 | 0.0 | 1.2 | 489.6 | 454.8 | . | 480.2 |
| Italy | 115 | 114 | 9.9 | 90.1 | 0.0 | 1.1 | 418.2 | 424.6 | . | 270.8 |
| Lebanon | 239 | 227 | 3.8 | 96.2 | 0.0 | 4.5 | 436.6 | 443.6 | . | 447.7 |
| Netherlands | 119 | 111 | 16.0 | 84.0 | 5.8 | 1.1 | 588.6 | 582.1 | 576.0 | 565.8 |
| Norway | 129 | 119 | 13.4 | 86.6 | 0.4 | 6.8 | 526.1 | 532.8 | 595.9 | 561.2 |
| Russian Federation | 158 | 157 | 20.1 | 79.9 | 0.0 | 1.5 | 539.1 | 515.3 | . | 599.4 |
| Slovenia | 66 | 66 | 10.4 | 89.6 | 0.0 | 0.0 | 559.1 | 532.2 | . | . |
| Sweden | 155 | 146 | 15.3 | 84.7 | 2.0 | 2.5 | 487.2 | 500.7 | 478.5 | 445.3 |
| International Avg. | 133 | 128 | 11.9 | 88.1 | 0.9 | 2.3 | 517.6 | 497.3 | 550.2 | 479.6 |

Question : During your post-secondary education, was education-science your main area of study?
 Location : TQP3-06E (PT2GPSES)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 55 | 22.2 | 77.8 | 0.0 | 3.2 | 497.7 | 496.0 | . | 436.5 |
| Iran, Islamic Rep. of | 155 | 153 | 9.4 | 90.6 | 0.0 | 1.5 | 460.2 | 459.6 | . | 470.1 |
| Italy | 115 | . | . | . | 100.0 | 0.0 | . | . | 422.2 | . |
| Lebanon | 239 | 228 | 22.0 | 78.0 | 0.0 | 4.6 | 460.6 | 438.6 | . | 445.7 |
| Netherlands | 119 | 111 | 51.2 | 48.8 | 5.8 | 1.1 | 581.7 | 584.6 | 576.0 | 565.8 |
| Norway | 129 | 118 | 2.0 | 98.0 | 0.4 | 7.6 | 526.0 | 531.8 | 595.9 | 560.1 |
| Russian Federation | 158 | 158 | 36.4 | 63.6 | 0.0 | 0.0 | 535.0 | 513.4 | . | . |
| Slovenia | 66 | 66 | 8.3 | 91.7 | 0.0 | 0.0 | 547.3 | 533.8 | . | . |
| Sweden | 155 | 147 | 44.1 | 55.9 | 2.0 | 2.2 | 499.4 | 498.2 | 478.5 | 434.2 |
| International Avg. | 133 | 130 | 24.4 | 75.6 | 12.0 | 2.2 | 513.5 | 507.0 | 518.2 | 485.4 |

Question : During your post-secondary education, was mathematics your main area of study?
 Location : TQP3-06F (PT2GPSMA)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 57 | 41.6 | 58.4 | 0.0 | 2.0 | 493.0 | 495.5 | . | 493.6 |
| Iran, Islamic Rep. of | 155 | 153 | 11.4 | 88.6 | 0.0 | 1.5 | 470.3 | 458.3 | . | 470.1 |
| Italy | 115 | 114 | 50.2 | 49.8 | 0.0 | 1.1 | 433.8 | 414.0 | . | 270.8 |
| Lebanon | 239 | 230 | 26.5 | 73.5 | 0.0 | 3.6 | 443.1 | 443.8 | . | 439.8 |
| Netherlands | 119 | 111 | 28.7 | 71.3 | 5.8 | 1.1 | 584.6 | 582.5 | 576.0 | 565.8 |
| Norway | 129 | 125 | 94.9 | 5.1 | 0.8 | 1.1 | 534.0 | 531.6 | 555.1 | 536.7 |
| Russian Federation | 158 | 154 | 38.4 | 61.6 | 0.5 | 2.0 | 543.1 | 509.9 | 506.3 | 459.3 |
| Slovenia | 66 | 66 | 3.8 | 96.2 | 0.0 | 0.0 | 537.6 | 534.8 | . | . |
| Sweden | 155 | 149 | 90.1 | 9.9 | 2.0 | 0.6 | 496.6 | 507.9 | 478.5 | 437.0 |
| International Avg. | 133 | 129 | 42.9 | 57.1 | 1.0 | 1.4 | 504.0 | 497.6 | 529.0 | 459.2 |

Question : During your post-secondary education, was education-mathematics your main area of study?
 Location : TQP3-06G (PT2GPSEM)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 50 | 18.4 | 81.6 | 0.0 | 13.3 | 517.7 | 492.8 | . | 475.4 |
| Iran, Islamic Rep. of | 155 | 153 | 6.3 | 93.7 | 0.0 | 1.5 | 419.9 | 462.4 | . | 470.1 |
| Italy | 115 | . | . | . | 100.0 | 0.0 | . | . | 422.2 | . |
| Lebanon | 239 | 226 | 15.6 | 84.4 | 0.0 | 5.3 | 439.9 | 444.3 | . | 441.2 |
| Netherlands | 119 | 112 | 12.1 | 87.9 | 5.8 | 0.0 | 587.0 | 582.3 | 576.0 | . |
| Norway | 129 | 118 | 2.4 | 97.6 | 0.4 | 7.7 | 506.3 | 532.4 | 595.9 | 558.4 |
| Russian Federation | 158 | 154 | 13.7 | 86.3 | 0.0 | 2.5 | 544.7 | 519.4 | . | 457.1 |
| Slovenia | 66 | 66 | 8.0 | 92.0 | 0.0 | 0.0 | 535.6 | 534.9 | . | . |
| Sweden | 155 | 147 | 60.5 | 39.5 | 2.0 | 1.3 | 495.8 | 499.7 | 478.5 | 494.2 |
| International Avg. | 133 | 128 | 17.1 | 82.9 | 12.0 | 3.5 | 505.8 | 508.5 | 518.2 | 482.8 |

Question : During your post-secondary education, was education-general your main area of study?
 Location : TQP3-06H (PT2GPSEG)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 54 | 28.3 | 71.7 | 0.0 | 5.9 | 500.3 | 492.0 | . | 496.0 |
| Iran, Islamic Rep. of | 155 | 153 | 3.7 | 96.3 | 0.0 | 1.5 | 433.3 | 460.7 | . | 470.1 |
| Italy | 115 | . | . | . | 100.0 | 0.0 | . | . | 422.2 | . |
| Lebanon | 239 | 224 | 13.1 | 86.9 | 0.0 | 6.2 | 445.7 | 442.8 | . | 449.2 |
| Netherlands | 119 | . | . | . | 100.0 | 0.0 | . | . | 582.5 | . |
| Norway | 129 | 118 | 17.5 | 82.5 | 0.4 | 8.0 | 522.3 | 533.9 | 595.9 | 556.7 |
| Russian Federation | 158 | 156 | 39.0 | 61.0 | 0.0 | 1.3 | 540.2 | 511.3 | . | 422.9 |
| Slovenia | 66 | 66 | . | 100.0 | 0.0 | 0.0 | . | 535.0 | . | . |
| Sweden | 155 | 147 | 31.9 | 68.1 | 2.0 | 1.3 | 497.4 | 497.4 | 478.5 | 489.7 |
| International Avg. | 133 | 131 | 22.2 | 80.9 | 22.5 | 2.7 | 489.9 | 496.1 | 519.8 | 480.8 |

Question : During your post-secondary education, was <other> your main area of study?
Location : TQP3-06I (PT2GPSOT)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 50 | 12.4 | 87.6 | 0.0 | 13.2 | 460.4 | 499.8 | . | 491.1 |
| Iran, Islamic Rep. of | 155 | 153 | 2.8 | 97.2 | 0.0 | 1.5 | 473.2 | 459.3 | . | 470.1 |
| Italy | 115 | 114 | . | 100.0 | 0.0 | 1.1 | . | 423.9 | . | 270.8 |
| Lebanon | 239 | 216 | 12.0 | 88.0 | 0.0 | 9.2 | 437.2 | 443.0 | . | 455.7 |
| Netherlands | 119 | 111 | 9.0 | 91.0 | 5.8 | 1.1 | 592.0 | 582.2 | 576.0 | 565.8 |
| Norway | 129 | 120 | 35.3 | 64.7 | 0.4 | 6.3 | 538.2 | 529.6 | 595.9 | 551.9 |
| Russian Federation | 158 | 146 | 9.6 | 90.4 | 0.0 | 7.5 | 577.4 | 510.2 | . | 578.3 |
| Slovenia | 66 | 66 | 3.4 | 96.6 | 0.0 | 0.0 | 537.4 | 534.9 | . | . |
| Sweden | 155 | 139 | 11.8 | 88.2 | 2.0 | 4.9 | 497.8 | 497.6 | 478.5 | 490.7 |
| International Avg. | 133 | 124 | 12.0 | 89.3 | 0.9 | 5.0 | 514.2 | 497.8 | 550.2 | 484.3 |

Question : Do you have a teaching license or certificate?
 Location : TQP3-07 (PT2GTLCE)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 96.5 | 3.5 | 0.0 | 0.0 | 496.8 | 429.8 | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 97.8 | 2.2 | 0.0 | 0.0 | 459.0 | 498.8 | . | . |
| Italy | 115 | 114 | 100.0 | . | 0.0 | 1.1 | 423.9 | . | . | 270.8 |
| Lebanon | 239 | 228 | 97.4 | 2.6 | 0.0 | 4.0 | 445.0 | 429.7 | . | 416.9 |
| Netherlands | 119 | . | . | . | 100.0 | 0.0 | . | . | 582.5 | . |
| Norway | 129 | 128 | 95.5 | 4.5 | 0.4 | 0.0 | 533.4 | 543.7 | 595.9 | . |
| Russian Federation | 158 | 158 | 92.2 | 7.8 | 0.0 | 0.0 | 520.5 | 530.6 | . | . |
| Slovenia | 66 | 65 | 92.6 | 7.4 | 0.0 | 1.7 | 533.2 | 572.0 | . | 469.2 |
| Sweden | 155 | . | . | . | 100.0 | 0.0 | . | . | 496.9 | . |
| International Avg. | 133 | 129 | 96.0 | 4.7 | 22.3 | 0.8 | 487.4 | 500.8 | 558.5 | 385.7 |

Question : How well prepared do you feel you are to teach the conditions for equilibrium and the dynamics of different types of movement?
Location : TQP3-08AA (PT2PTT01)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 58 | 83.0 | 17.0 | . | 0.0 | 0.0 | 496.9 | 482.6 | . | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 92.0 | 8.0 | . | 0.0 | 0.0 | 461.9 | 436.8 | . | . | . |
| Italy | 115 | 114 | 54.5 | 45.5 | . | 0.0 | 1.1 | 419.4 | 429.4 | . | . | 270.8 |
| Lebanon | 239 | 234 | 96.0 | 0.8 | 3.2 | 1.3 | 0.6 | 444.0 | 355.4 | 459.7 | 414.5 | 462.3 |
| Netherlands | 119 | 112 | 89.8 | 10.2 | . | 5.8 | 0.0 | 582.5 | 586.8 | . | 576.0 | . |
| Norway | 129 | 128 | 91.7 | 8.3 | . | 0.4 | 0.0 | 533.8 | 534.5 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 89.7 | 10.3 | . | 0.0 | 0.8 | 535.8 | 523.1 | . | . | 593.7 |
| Sweden | 155 | 150 | 95.6 | 4.4 | . | 2.0 | 0.4 | 497.8 | 499.0 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 86.5 | 13.1 | 3.2 | 12.2 | 0.3 | 496.5 | 480.9 | 459.7 | 517.2 | 428.3 |

Question : How well prepared do you feel you are to teach kinetic and potential energy?
Location : TQP3-08AB (PT2PTT02)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 58 | 96.7 | 3.3 | . | 0.0 | 0.0 | 493.8 | 512.2 | . | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 99.4 | . | 0.6 | 0.0 | 0.0 | 459.6 | . | 500.3 | . | . |
| Italy | 115 | 114 | 61.4 | 38.6 | . | 0.0 | 1.1 | 422.2 | 426.6 | . | . | 270.8 |
| Lebanon | 239 | 234 | 96.8 | . | 3.2 | 1.3 | 0.6 | 443.2 | . | 459.7 | 414.5 | 462.3 |
| Netherlands | 119 | 112 | 91.0 | 9.0 | . | 5.8 | 0.0 | 582.5 | 586.4 | . | 576.0 | . |
| Norway | 129 | 128 | 99.0 | 1.0 | . | 0.4 | 0.0 | 533.9 | 528.0 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 84.3 | 15.7 | . | 0.0 | 0.8 | 534.9 | 532.5 | . | . | 593.7 |
| Sweden | 155 | 150 | 97.0 | 3.0 | . | 2.0 | 0.4 | 498.0 | 493.4 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 90.7 | 11.8 | 1.9 | 12.2 | 0.3 | 496.0 | 513.2 | 480.0 | 517.2 | 428.3 |

Question : How well prepared do you feel you are to teach mechanical wave phenomena in sound, water, and strings?
 Location : TQP3-08AC (PT2PTT03)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 57 | 81.2 | 18.8 | . | 0.0 | 1.6 | 495.5 | 492.4 | . | . | 465.4 |
| Iran, Islamic Rep. of | 155 | 155 | 91.7 | 7.2 | 1.1 | 0.0 | 0.0 | 462.6 | 424.2 | 461.7 | . | . |
| Italy | 115 | 114 | 42.9 | 56.4 | 0.7 | 0.0 | 1.1 | 411.8 | 432.7 | 454.8 | . | 270.8 |
| Lebanon | 239 | 234 | 91.1 | 8.0 | 0.8 | 1.3 | 0.6 | 443.4 | 452.3 | 400.4 | 414.5 | 462.3 |
| Netherlands | 119 | 112 | 86.9 | 13.1 | . | 5.8 | 0.0 | 583.4 | 579.4 | . | 576.0 | . |
| Norway | 129 | 128 | 95.6 | 4.4 | . | 0.4 | 0.0 | 533.5 | 541.4 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 81.5 | 18.5 | . | 0.0 | 0.8 | 541.1 | 505.4 | . | . | 593.7 |
| Sweden | 155 | 150 | 89.3 | 10.7 | . | 2.0 | 0.4 | 497.9 | 497.0 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 82.5 | 17.1 | 0.9 | 12.2 | 0.5 | 496.2 | 490.6 | 439.0 | 517.2 | 435.7 |

Question : How well prepared do you feel you are to teach forces, including frictional force, acting on a moving body?
 Location : TQP3-08AD (PT2PTT04)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 56 | 90.8 | 9.2 | . | 0.0 | 3.1 | 497.5 | 473.0 | . | . | 468.5 |
| Iran, Islamic Rep. of | 155 | 155 | 96.9 | 2.5 | 0.6 | 0.0 | 0.0 | 460.8 | 411.5 | 500.3 | . | . |
| Italy | 115 | 114 | 61.3 | 38.7 | . | 0.0 | 1.1 | 422.7 | 425.9 | . | . | 270.8 |
| Lebanon | 239 | 233 | 94.4 | 3.7 | 2.0 | 0.6 | 1.8 | 442.7 | 435.4 | 461.7 | 440.9 | 480.4 |
| Netherlands | 119 | 112 | 92.0 | 8.0 | . | 5.8 | 0.0 | 583.0 | 581.7 | . | 576.0 | . |
| Norway | 129 | 128 | 99.0 | 1.0 | . | 0.4 | 0.0 | 533.9 | 528.0 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 90.0 | 10.0 | . | 0.0 | 0.8 | 535.6 | 524.4 | . | . | 593.7 |
| Sweden | 155 | 149 | 94.6 | 5.4 | . | 2.0 | 2.0 | 498.2 | 489.6 | . | 478.5 | 478.5 |
| International Avg. | 133 | 127 | 89.9 | 9.8 | 1.3 | 12.1 | 1.0 | 496.8 | 483.7 | 481.0 | 522.5 | 458.4 |

Question : How well prepared do you feel you are to teach forces acting on a body moving in a circular path?
 Location : TQP3-08AE (PT2PTT05)

| Country | Sample | Valid N | 1.VERY WELL PREPARE | 2.SOMEW HAT PREPARE | 3.NOT WELL PREPARE | Not Adminis tered | Omitted | 1.VERY WELL PREPARE | 2.SOMEW HAT PREPARE | 3.NOT WELL PREPARE | Not Adminis tered | Omitted |
|-----------------------|--------|---------|---------------------------|---------------------------|--------------------------|-------------------------|---------|---------------------------|---------------------------|--------------------------|-------------------------|-----------|
| | | | D % | D % | D % | % | % | D Mean | D Mean | D Mean | D Mean | D Mean |
| Armenia | 58 | 56 | 83.9 | 16.1 | . | 0.0 | 2.0 | 494.9 | 503.8 | . | . | 401.5 |
| Iran, Islamic Rep. of | 155 | 155 | 88.4 | 9.8 | 1.8 | 0.0 | 0.0 | 463.8 | 418.6 | 491.0 | . | . |
| Italy | 115 | 114 | 55.4 | 44.2 | 0.4 | 0.0 | 1.1 | 421.5 | 425.7 | 580.8 | . | 270.8 |
| Lebanon | 239 | 235 | 93.2 | 4.1 | 2.7 | 0.6 | 0.6 | 443.8 | 416.8 | 470.9 | 440.9 | 462.3 |
| Netherlands | 119 | 112 | 87.3 | 12.7 | . | 5.8 | 0.0 | 583.0 | 582.3 | . | 576.0 | . |
| Norway | 129 | 128 | 98.7 | 1.3 | . | 0.4 | 0.0 | 533.7 | 547.9 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 75.7 | 24.3 | . | 0.0 | 0.8 | 536.2 | 529.2 | . | . | 593.7 |
| Sweden | 155 | 150 | 95.9 | 4.1 | . | 2.0 | 0.4 | 497.7 | 499.8 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 84.8 | 14.6 | 1.6 | 12.1 | 0.6 | 496.8 | 490.5 | 514.2 | 522.5 | 422.9 |

Question : How well prepared do you feel you are to teach elastic and inelastic collision?
 Location : TQP3-08AF (PT2PTT06)

| Country | Sample | Valid N | 1.VERY | 2.SOMEW | 3.NOT | Not | Omitted | 1.VERY | 2.SOMEW | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|---------------------------|--------------------------|---------------------------|-------|---------|------------------------------|-----------------------------|------------------------------|-------|---------|
| | | | WELL PREPARE D % | HAT PREPARE D % | WELL PREPARE D % | | | WELL PREPARE D Mean | HAT PREPARE D Mean | WELL PREPARE D Mean | | |
| Armenia | 58 | 58 | 74.4 | 25.6 | . | 0.0 | 0.0 | 494.9 | 493.2 | . | . | . |
| Iran, Islamic Rep. of | 155 | 152 | 72.8 | 22.0 | 5.2 | 0.0 | 2.6 | 462.0 | 453.7 | 410.9 | . | 545.1 |
| Italy | 115 | 114 | 55.6 | 44.4 | . | 0.0 | 1.1 | 421.2 | 427.3 | . | . | 270.8 |
| Lebanon | 239 | 235 | 95.2 | 1.9 | 2.9 | 0.6 | 0.6 | 443.3 | 445.5 | 440.5 | 467.0 | 462.3 |
| Netherlands | 119 | 112 | 82.2 | 16.8 | 1.0 | 5.8 | 0.0 | 583.6 | 577.4 | 615.7 | 576.0 | . |
| Norway | 129 | 128 | 95.4 | 4.6 | . | 0.4 | 0.0 | 532.7 | 557.9 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 78.0 | 22.0 | . | 0.0 | 0.8 | 538.6 | 520.0 | . | . | 593.7 |
| Sweden | 155 | 150 | 96.8 | 2.9 | 0.3 | 2.0 | 0.4 | 498.2 | 490.7 | 451.1 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 81.3 | 17.5 | 2.3 | 12.1 | 0.6 | 496.8 | 495.7 | 479.6 | 527.7 | 451.6 |

Question : How well prepared do you feel you are to teach the aspects of relativity?
Location : TQP3-08AG (PT2PTT07)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 56 | 47.8 | 52.2 | . | 0.0 | 7.8 | 501.3 | 496.2 | . | . | 445.2 |
| Iran, Islamic Rep. of | 155 | 155 | 24.2 | 53.4 | 22.4 | 0.0 | 0.0 | 459.5 | 469.7 | 436.9 | . | . |
| Italy | 115 | 114 | 18.9 | 72.0 | 9.1 | 0.0 | 1.1 | 413.8 | 425.8 | 430.0 | . | 270.8 |
| Lebanon | 239 | 233 | 76.9 | 19.2 | 3.9 | 0.0 | 2.3 | 446.7 | 433.6 | 416.4 | . | 464.6 |
| Netherlands | 119 | 112 | 31.0 | 51.3 | 17.7 | 5.8 | 0.0 | 583.4 | 581.1 | 587.3 | 576.0 | . |
| Norway | 129 | 128 | 78.1 | 20.9 | 1.1 | 0.4 | 0.0 | 532.8 | 539.3 | 501.5 | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 41.9 | 37.0 | 21.1 | 0.0 | 0.8 | 544.4 | 530.9 | 521.1 | . | 593.7 |
| Sweden | 155 | 149 | 59.3 | 36.6 | 4.1 | 2.0 | 0.9 | 499.0 | 498.6 | 485.9 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 47.3 | 42.8 | 11.3 | 12.0 | 1.4 | 497.6 | 496.9 | 482.7 | 542.9 | 432.1 |

Question : How well prepared do you feel you are to teach electrostatic attraction or repulsion between isolated charged particles?
 Location : TQP3-08BA (PT2PTT08)

| Country | Sample | Valid N | 1.VERY WELL PREPARE | 2.SOMEW HAT PREPARE | 3.NOT WELL PREPARE | Not Adminis tered | Omitted | 1.VERY WELL PREPARE | 2.SOMEW HAT PREPARE | 3.NOT WELL PREPARE | Not Adminis tered | Omitted |
|-----------------------|--------|---------|---------------------------|---------------------------|--------------------------|-------------------------|---------|---------------------------|---------------------------|--------------------------|-------------------------|-----------|
| | | | D % | D % | D % | % | % | D Mean | D Mean | D Mean | D Mean | D Mean |
| Armenia | 58 | 58 | 90.9 | 9.1 | . | 0.0 | 0.0 | 495.5 | 483.8 | . | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 98.2 | 1.2 | 0.6 | 0.0 | 0.0 | 460.2 | 411.4 | 500.3 | . | . |
| Italy | 115 | 114 | 62.4 | 37.6 | . | 0.0 | 1.1 | 422.0 | 427.1 | . | . | 270.8 |
| Lebanon | 239 | 235 | 94.3 | 2.3 | 3.4 | 0.0 | 1.3 | 443.6 | 442.0 | 463.4 | . | 389.4 |
| Netherlands | 119 | 112 | 81.3 | 18.7 | . | 5.8 | 0.0 | 583.9 | 578.4 | . | 576.0 | . |
| Norway | 129 | 128 | 98.9 | 1.1 | . | 0.4 | 0.0 | 533.9 | 528.5 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 87.8 | 12.2 | . | 0.0 | 0.8 | 534.7 | 533.1 | . | . | 593.7 |
| Sweden | 155 | 150 | 94.1 | 5.9 | . | 2.0 | 0.4 | 498.1 | 493.6 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 88.5 | 11.0 | 2.0 | 12.0 | 0.4 | 496.5 | 487.2 | 481.9 | 542.9 | 410.0 |

Question : How well prepared do you feel you are to teach electrical circuits?
Location : TQP3-08BB (PT2PTT09)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 58 | 88.6 | 11.4 | . | 0.0 | 0.0 | 490.3 | 526.9 | . | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 83.3 | 15.0 | 1.7 | 0.0 | 0.0 | 465.3 | 427.6 | 475.2 | . | . |
| Italy | 115 | 114 | 51.0 | 49.0 | . | 0.0 | 1.1 | 418.4 | 429.7 | . | . | 270.8 |
| Lebanon | 239 | 236 | 92.1 | 6.3 | 1.6 | 0.0 | 0.6 | 443.8 | 437.5 | 445.5 | . | 462.3 |
| Netherlands | 119 | 112 | 87.0 | 13.0 | . | 5.8 | 0.0 | 582.5 | 585.3 | . | 576.0 | . |
| Norway | 129 | 128 | 92.9 | 6.3 | 0.8 | 0.4 | 0.0 | 534.3 | 527.0 | 541.0 | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 81.7 | 18.3 | . | 0.0 | 0.8 | 537.3 | 521.8 | . | . | 593.7 |
| Sweden | 155 | 150 | 81.9 | 17.8 | 0.3 | 2.0 | 0.4 | 502.4 | 476.7 | 493.5 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 82.3 | 17.1 | 1.1 | 12.0 | 0.3 | 496.8 | 491.5 | 488.8 | 542.9 | 428.3 |

Question : How well prepared do you feel you are to teach magnetic forces?
Location : TQP3-08BC (PT2PTT10)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 57 | 79.8 | 20.2 | . | 0.0 | 1.5 | 484.3 | 535.8 | . | . | 480.6 |
| Iran, Islamic Rep. of | 155 | 155 | 95.7 | 3.7 | 0.6 | 0.0 | 0.0 | 461.9 | 400.3 | 500.3 | . | . |
| Italy | 115 | 114 | 58.3 | 41.7 | . | 0.0 | 1.1 | 425.6 | 421.6 | . | . | 270.8 |
| Lebanon | 239 | 234 | 92.1 | 4.0 | 3.9 | 0.0 | 1.7 | 444.1 | 428.1 | 441.7 | . | 452.2 |
| Netherlands | 119 | 112 | 81.2 | 18.8 | . | 5.8 | 0.0 | 582.4 | 585.0 | . | 576.0 | . |
| Norway | 129 | 128 | 96.9 | 3.1 | . | 0.4 | 0.0 | 533.5 | 544.3 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 64 | 81.3 | 18.7 | . | 0.0 | 2.0 | 536.4 | 522.3 | . | . | 592.0 |
| Sweden | 155 | 150 | 91.4 | 8.6 | . | 2.0 | 0.4 | 498.2 | 494.2 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 84.6 | 14.8 | 2.3 | 12.0 | 0.8 | 495.8 | 491.4 | 471.0 | 542.9 | 436.4 |

Question : How well prepared do you feel you are to teach electromagnetic radiation?
Location : TQP3-08BD (PT2PTT11)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 56 | 68.7 | 31.3 | . | 0.0 | 2.9 | 497.0 | 491.0 | . | . | 470.7 |
| Iran, Islamic Rep. of | 155 | 155 | 90.6 | 8.6 | 0.8 | 0.0 | 0.0 | 462.8 | 421.1 | 542.3 | . | . |
| Italy | 115 | 114 | 25.8 | 69.1 | 5.1 | 0.0 | 1.1 | 429.0 | 424.0 | 397.2 | . | 270.8 |
| Lebanon | 239 | 236 | 90.5 | 5.8 | 3.7 | 0.0 | 0.6 | 443.2 | 444.7 | 445.3 | . | 462.3 |
| Netherlands | 119 | 112 | 83.2 | 16.8 | . | 5.8 | 0.0 | 584.2 | 576.6 | . | 576.0 | . |
| Norway | 129 | 128 | 95.7 | 4.3 | . | 0.4 | 0.0 | 533.0 | 554.0 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 64 | 69.2 | 29.6 | 1.2 | 0.0 | 2.0 | 537.5 | 524.8 | 544.0 | . | 592.0 |
| Sweden | 155 | 150 | 93.1 | 6.6 | 0.3 | 2.0 | 0.4 | 496.8 | 516.8 | 398.9 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 77.1 | 21.5 | 2.2 | 12.0 | 0.8 | 497.9 | 494.1 | 465.5 | 542.9 | 436.4 |

Question : How well prepared do you feel you are to teach heat transfer?
Location : TQP3-08CA (PT2PTT12)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 58 | 87.5 | 12.5 | . | 0.0 | 0.0 | 496.1 | 482.7 | . | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 96.6 | 2.8 | 0.6 | 0.0 | 0.0 | 461.7 | 387.3 | 500.3 | . | . |
| Italy | 115 | 114 | 59.2 | 40.8 | . | 0.0 | 1.1 | 423.5 | 424.6 | . | . | 270.8 |
| Lebanon | 239 | 232 | 81.1 | 14.3 | 4.7 | 0.0 | 2.3 | 444.7 | 448.3 | 417.4 | . | 425.4 |
| Netherlands | 119 | 112 | 89.7 | 10.3 | . | 5.8 | 0.0 | 582.8 | 583.5 | . | 576.0 | . |
| Norway | 129 | 128 | 93.9 | 5.3 | 0.8 | 0.4 | 0.0 | 534.7 | 517.2 | 541.0 | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 80.5 | 19.5 | . | 0.0 | 0.8 | 537.4 | 522.4 | . | . | 593.7 |
| Sweden | 155 | 150 | 92.3 | 7.7 | . | 2.0 | 0.4 | 498.8 | 485.6 | . | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 85.1 | 14.1 | 2.0 | 12.0 | 0.5 | 497.5 | 481.5 | 486.2 | 542.9 | 419.0 |

Question : How well prepared do you feel you are to teach expansion of matters?
Location : TQP3-08CB (PT2PTT13)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 57 | 91.6 | 8.4 | . | 0.0 | 1.5 | 491.6 | 527.9 | . | . | 480.6 |
| Iran, Islamic Rep. of | 155 | 155 | 93.9 | 5.5 | 0.6 | 0.0 | 0.0 | 462.6 | 409.2 | 500.3 | . | . |
| Italy | 115 | 114 | 56.0 | 44.0 | . | 0.0 | 1.1 | 427.6 | 419.3 | . | . | 270.8 |
| Lebanon | 239 | 231 | 71.9 | 20.9 | 7.2 | 0.0 | 2.9 | 446.6 | 441.7 | 422.0 | . | 433.4 |
| Netherlands | 119 | 112 | 86.3 | 13.7 | . | 5.8 | 0.0 | 584.2 | 574.6 | . | 576.0 | . |
| Norway | 129 | 128 | 87.9 | 12.1 | . | 0.4 | 0.0 | 532.6 | 542.7 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 64 | 83.9 | 16.1 | . | 0.0 | 2.9 | 536.7 | 523.1 | . | . | 551.0 |
| Sweden | 155 | 150 | 61.3 | 33.8 | 4.9 | 2.0 | 0.4 | 497.2 | 505.6 | 451.4 | 478.5 | 386.2 |
| International Avg. | 133 | 126 | 79.1 | 19.3 | 4.2 | 12.0 | 1.0 | 497.4 | 493.0 | 457.9 | 542.9 | 424.4 |

Question : How well prepared do you feel you are to teach black body?
Location : TQP3-08CC (PT2PTT14)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 57 | 63.7 | 36.3 | . | 0.0 | 1.5 | 501.2 | 483.2 | . | . | 480.6 |
| Iran, Islamic Rep. of | 155 | 155 | 83.2 | 16.6 | 0.2 | 0.0 | 0.0 | 461.7 | 451.9 | 366.8 | . | . |
| Italy | 115 | 114 | 27.1 | 65.6 | 7.4 | 0.0 | 1.1 | 419.3 | 421.0 | 466.8 | . | 270.8 |
| Lebanon | 239 | 231 | 45.5 | 36.0 | 18.6 | 0.0 | 2.9 | 453.2 | 433.2 | 445.7 | . | 406.7 |
| Netherlands | 119 | 112 | 80.3 | 19.7 | . | 5.8 | 0.0 | 582.5 | 584.7 | . | 576.0 | . |
| Norway | 129 | 128 | 89.2 | 10.8 | . | 0.4 | 0.0 | 533.7 | 534.9 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 68.2 | 31.8 | . | 0.0 | 0.8 | 536.2 | 530.9 | . | . | 593.7 |
| Sweden | 155 | 150 | 78.2 | 17.8 | 4.0 | 2.0 | 0.4 | 499.5 | 491.3 | 493.5 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 66.9 | 29.3 | 7.5 | 12.0 | 0.7 | 498.4 | 491.4 | 443.2 | 542.9 | 427.6 |

Question : How well prepared do you feel you are to teach atomic structure?
 Location : TQP3-08DA (PT2PTT15)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 56 | 78.1 | 21.9 | . | 0.0 | 3.4 | 497.2 | 492.8 | . | . | 442.5 |
| Iran, Islamic Rep. of | 155 | 155 | 96.1 | 2.5 | 1.4 | 0.0 | 0.0 | 461.1 | 374.3 | 524.3 | . | . |
| Italy | 115 | 114 | 29.0 | 64.6 | 6.4 | 0.0 | 1.1 | 408.1 | 424.2 | 492.6 | . | 270.8 |
| Lebanon | 239 | 237 | 93.9 | 3.5 | 2.6 | 0.0 | 0.4 | 444.5 | 427.0 | 435.5 | . | 417.9 |
| Netherlands | 119 | 112 | 88.9 | 11.1 | . | 5.8 | 0.0 | 583.6 | 577.3 | . | 576.0 | . |
| Norway | 129 | 127 | 96.3 | 3.7 | . | 0.4 | 0.6 | 532.9 | 551.8 | . | 595.9 | 577.8 |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 78.8 | 20.7 | 0.5 | 0.0 | 0.8 | 536.9 | 526.3 | 497.1 | . | 593.7 |
| Sweden | 155 | 150 | 90.8 | 8.9 | 0.3 | 2.0 | 0.4 | 498.4 | 495.5 | 398.9 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 81.5 | 17.1 | 2.2 | 12.0 | 0.8 | 495.3 | 483.6 | 469.7 | 542.9 | 448.2 |

Question : How well prepared do you feel you are to teach photoelectric effect?
 Location : TQP3-08DB (PT2PTT16)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 57 | 77.8 | 22.2 | . | 0.0 | 1.5 | 496.1 | 489.5 | . | . | 480.6 |
| Iran, Islamic Rep. of | 155 | 155 | 92.7 | 5.9 | 1.4 | 0.0 | 0.0 | 464.2 | 374.9 | 524.3 | . | . |
| Italy | 115 | 114 | 25.1 | 66.2 | 8.7 | 0.0 | 1.1 | 416.4 | 419.9 | 476.6 | . | 270.8 |
| Lebanon | 239 | 237 | 93.4 | 3.3 | 3.3 | 0.0 | 0.4 | 443.8 | 446.0 | 435.0 | . | 417.9 |
| Netherlands | 119 | 112 | 88.3 | 11.7 | . | 5.8 | 0.0 | 583.3 | 580.1 | . | 576.0 | . |
| Norway | 129 | 128 | 95.5 | 4.5 | . | 0.4 | 0.0 | 534.1 | 529.5 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 66.4 | 33.1 | 0.5 | 0.0 | 0.8 | 537.1 | 529.9 | 497.1 | . | 593.7 |
| Sweden | 155 | 150 | 91.3 | 8.2 | 0.5 | 2.0 | 0.4 | 499.0 | 484.2 | 497.4 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 78.8 | 19.4 | 2.9 | 12.0 | 0.5 | 496.8 | 481.7 | 486.1 | 542.9 | 429.8 |

Question : How well prepared do you feel you are to teach nuclear reactions?
Location : TQP3-08DC (PT2PTT17)

| Country | Sample | Valid N | 1.VERY WELL PREPARE D % | 2.SOMEW HAT PREPARE D % | 3.NOT WELL PREPARE D % | Not Adminis tered % | Omitted % | 1.VERY WELL PREPARE D Mean | 2.SOMEW HAT PREPARE D Mean | 3.NOT WELL PREPARE D Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|-------------------------------------|-------------------------------------|------------------------------------|------------------------------|--------------|--|--|---------------------------------------|---------------------------------|-----------------|
| | | | | | | | | | | | | |
| Armenia | 58 | 58 | 51.4 | 43.5 | 5.1 | 0.0 | 0.0 | 495.3 | 494.0 | 489.1 | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 45.8 | 47.7 | 6.5 | 0.0 | 0.0 | 465.6 | 449.4 | 495.9 | . | . |
| Italy | 115 | 114 | 12.1 | 56.2 | 31.7 | 0.0 | 1.1 | 422.3 | 412.1 | 445.5 | . | 270.8 |
| Lebanon | 239 | 235 | 92.3 | 5.0 | 2.6 | 0.0 | 1.0 | 444.1 | 437.4 | 435.5 | . | 442.8 |
| Netherlands | 119 | 112 | 83.5 | 16.5 | . | 5.8 | 0.0 | 582.5 | 584.8 | . | 576.0 | . |
| Norway | 129 | 128 | 83.8 | 16.2 | . | 0.4 | 0.0 | 533.5 | 535.5 | . | 595.9 | . |
| Russian Federation | 158 | . | . | . | . | 100.0 | 0.0 | . | . | . | 521.2 | . |
| Slovenia | 66 | 65 | 63.8 | 32.8 | 3.4 | 0.0 | 0.8 | 537.6 | 530.0 | 519.7 | . | 593.7 |
| Sweden | 155 | 150 | 80.7 | 18.2 | 1.1 | 2.0 | 0.4 | 500.3 | 485.2 | 525.1 | 478.5 | 386.2 |
| International Avg. | 133 | 127 | 64.2 | 29.5 | 8.4 | 12.0 | 0.4 | 497.7 | 491.1 | 485.1 | 542.9 | 423.4 |

Question : In your school, how often do you have discussions about how to teach a particular concept with other teachers?
 Location : TQP3-09A (PT2GOTDC)

| Country | Sample | Valid N | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis-tered | Omitted | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis-tered | Omitted |
|-----------------------|--------|---------|-----------------|----------------------|----------------|-----------------|-------------------|---------|-----------------|----------------------|----------------|-----------------|-------------------|---------|
| | | | OR ALMOST NEVER | OR 3 TIMES PER MONTH | TIMES PER WEEK | OR ALMOST DAILY | | | OR ALMOST NEVER | OR 3 TIMES PER MONTH | TIMES PER WEEK | OR ALMOST DAILY | | |
| | | | % | % | % | % | % | % | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 54 | 10.6 | 44.4 | 31.9 | 13.2 | 0.0 | 7.1 | 496.1 | 476.9 | 508.9 | 535.6 | . | 462.3 |
| Iran, Islamic Rep. of | 155 | 154 | 17.9 | 59.1 | 18.6 | 4.4 | 0.0 | 0.3 | 461.3 | 464.5 | 439.1 | 483.0 | . | 398.1 |
| Italy | 115 | 114 | 24.0 | 54.7 | 17.5 | 3.8 | 0.0 | 1.1 | 427.4 | 419.5 | 430.1 | 436.9 | . | 270.8 |
| Lebanon | 239 | 237 | 9.8 | 46.3 | 27.7 | 16.2 | 0.0 | 0.9 | 445.6 | 445.7 | 429.4 | 462.2 | . | 408.4 |
| Netherlands | 119 | 112 | 19.9 | 40.7 | 28.7 | 10.8 | 5.8 | 0.0 | 582.5 | 581.4 | 587.2 | 577.8 | 576.0 | . |
| Norway | 129 | 127 | 11.2 | 48.5 | 26.7 | 13.6 | 0.4 | 0.6 | 529.4 | 533.6 | 529.0 | 548.4 | 595.9 | 526.2 |
| Russian Federation | 158 | 157 | 8.7 | 36.9 | 30.8 | 23.6 | 0.0 | 0.5 | 481.6 | 518.5 | 514.4 | 545.0 | . | 720.0 |
| Slovenia | 66 | 64 | 10.6 | 57.8 | 27.4 | 4.1 | 0.0 | 2.7 | 511.0 | 526.6 | 546.2 | 606.7 | . | 583.8 |
| Sweden | 155 | 151 | 8.0 | 41.1 | 27.9 | 22.9 | 2.0 | 0.0 | 490.4 | 502.0 | 502.2 | 485.4 | 478.5 | . |
| International Avg. | 133 | 130 | 13.4 | 47.7 | 26.3 | 12.5 | 0.9 | 1.5 | 491.7 | 496.5 | 498.5 | 520.1 | 550.2 | 481.4 |

Question : In your school, how often do you work on preparing instructional materials with other teachers?
 Location : TQP3-09B (PT2GOTPM)

| Country | Sample | Valid N | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis-tered | Omitted | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis-tered | Omitted |
|-----------------------|--------|---------|-----------------|----------------------|----------------|-----------------|-------------------|---------|-----------------|----------------------|----------------|-----------------|-------------------|---------|
| | | | OR ALMOST NEVER | OR 3 TIMES PER MONTH | TIMES PER WEEK | OR ALMOST DAILY | | | OR ALMOST NEVER | OR 3 TIMES PER MONTH | TIMES PER WEEK | OR ALMOST DAILY | | |
| | | | % | % | % | % | % | % | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 51 | 20.9 | 46.2 | 23.0 | 9.8 | 0.0 | 12.5 | 484.3 | 505.7 | 489.8 | 505.7 | . | 472.7 |
| Iran, Islamic Rep. of | 155 | 153 | 40.5 | 44.1 | 6.5 | 8.8 | 0.0 | 0.7 | 458.7 | 468.9 | 444.9 | 432.8 | . | 436.1 |
| Italy | 115 | 114 | 50.2 | 35.2 | 11.0 | 3.6 | 0.0 | 1.1 | 410.8 | 433.0 | 436.5 | 479.1 | . | 270.8 |
| Lebanon | 239 | 232 | 23.3 | 41.0 | 25.3 | 10.4 | 0.0 | 2.5 | 432.1 | 446.6 | 446.9 | 448.1 | . | 446.3 |
| Netherlands | 119 | 112 | 33.8 | 51.0 | 13.7 | 1.6 | 5.8 | 0.0 | 581.0 | 587.1 | 579.2 | 519.1 | 576.0 | . |
| Norway | 129 | 127 | 20.2 | 51.8 | 24.7 | 3.3 | 0.4 | 0.6 | 535.9 | 527.2 | 541.9 | 567.7 | 595.9 | 526.2 |
| Russian Federation | 158 | 157 | 7.2 | 41.3 | 34.5 | 17.0 | 0.0 | 0.5 | 524.4 | 498.9 | 531.7 | 552.6 | . | 530.5 |
| Slovenia | 66 | 64 | 49.7 | 33.0 | 16.7 | 0.5 | 0.0 | 2.7 | 525.9 | 526.8 | 571.6 | 487.2 | . | 583.8 |
| Sweden | 155 | 151 | 13.3 | 42.7 | 24.7 | 19.4 | 2.0 | 0.0 | 509.0 | 496.6 | 503.3 | 483.2 | 478.5 | . |
| International Avg. | 133 | 129 | 28.8 | 42.9 | 20.0 | 8.3 | 0.9 | 2.3 | 495.8 | 499.0 | 505.1 | 497.3 | 550.2 | 466.6 |

Question : In your school, how often do you have visits to another teacher's classroom to observe his/her teaching?
 Location : TQP3-09C (PT2GOTVT)

| Country | Sample | Valid N | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis | Omitted | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis | Omitted |
|-----------------------|--------|---------|-------------------|------------------------|------------------|-------------------|-------------|---------|----------------------|---------------------------|---------------------|----------------------|-------------|---------|
| | | | OR ALMOST NEVER % | OR 3 TIMES PER MONTH % | TIMES PER WEEK % | OR ALMOST DAILY % | | | OR ALMOST NEVER Mean | OR 3 TIMES PER MONTH Mean | TIMES PER WEEK Mean | OR ALMOST DAILY Mean | | |
| Armenia | 58 | 56 | 10.2 | 41.8 | 46.8 | 1.2 | 0.0 | 3.1 | 497.9 | 495.6 | 493.7 | 548.9 | . | 458.5 |
| Iran, Islamic Rep. of | 155 | 155 | 86.4 | 8.1 | 1.6 | 3.8 | 0.0 | 0.0 | 460.0 | 455.5 | 481.4 | 456.6 | . | . |
| Italy | 115 | 114 | 93.9 | 4.1 | 2.0 | . | 0.0 | 1.1 | 422.3 | 433.8 | 480.2 | . | . | 270.8 |
| Lebanon | 239 | 233 | 63.2 | 27.6 | 6.0 | 3.2 | 0.0 | 2.0 | 443.2 | 451.7 | 409.6 | 451.8 | . | 429.3 |
| Netherlands | 119 | 112 | 86.3 | 12.5 | 0.8 | 0.4 | 5.8 | 0.0 | 586.2 | 561.6 | 534.0 | 624.0 | 576.0 | . |
| Norway | 129 | 127 | 95.4 | 3.7 | 0.9 | . | 0.4 | 0.6 | 533.6 | 540.5 | 541.0 | . | 595.9 | 526.2 |
| Russian Federation | 158 | 157 | 16.0 | 75.0 | 8.8 | 0.2 | 0.0 | 0.5 | 492.7 | 531.1 | 490.8 | 394.1 | . | 559.1 |
| Slovenia | 66 | 64 | 88.8 | 11.2 | . | . | 0.0 | 2.7 | 529.6 | 565.5 | . | . | . | 583.8 |
| Sweden | 155 | 151 | 73.0 | 19.7 | 6.0 | 1.3 | 2.0 | 0.0 | 497.2 | 493.5 | 498.8 | 555.1 | 478.5 | . |
| International Avg. | 133 | 130 | 68.1 | 22.6 | 9.1 | 1.7 | 0.9 | 1.1 | 495.8 | 503.2 | 491.2 | 505.1 | 550.2 | 471.3 |

Question : In your school, how often do you have informal observations of your classroom by another teacher?
 Location : TQP3-09D (PT2GOTIO)

| Country | Sample | Valid N | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis | Omitted | 1.NEVER | 2.2 | 3.1-3 | 4.DAILY | Not Adminis | Omitted |
|-----------------------|--------|---------|-------------------|------------------------|------------------|-------------------|-------------|---------|----------------------|---------------------------|---------------------|----------------------|-------------|---------|
| | | | OR ALMOST NEVER % | OR 3 TIMES PER MONTH % | TIMES PER WEEK % | OR ALMOST DAILY % | | | OR ALMOST NEVER Mean | OR 3 TIMES PER MONTH Mean | TIMES PER WEEK Mean | OR ALMOST DAILY Mean | | |
| Armenia | 58 | 57 | 20.6 | 55.6 | 22.3 | 1.6 | 0.0 | 1.8 | 489.2 | 503.2 | 484.3 | 483.5 | . | 422.9 |
| Iran, Islamic Rep. of | 155 | 154 | 85.3 | 10.7 | 0.4 | 3.7 | 0.0 | 0.4 | 461.1 | 438.1 | 437.0 | 502.5 | . | 407.2 |
| Italy | 115 | 114 | 86.4 | 11.2 | 1.3 | 1.2 | 0.0 | 1.1 | 421.9 | 423.0 | 615.8 | 371.2 | . | 270.8 |
| Lebanon | 239 | 229 | 70.9 | 23.7 | 3.1 | 2.2 | 0.0 | 4.2 | 445.4 | 437.2 | 420.9 | 460.1 | . | 454.6 |
| Netherlands | 119 | 112 | 88.1 | 9.9 | 1.5 | 0.4 | 5.8 | 0.0 | 584.9 | 568.8 | 544.9 | 624.0 | 576.0 | . |
| Norway | 129 | 127 | 94.4 | 3.7 | 1.9 | . | 0.4 | 0.6 | 533.5 | 528.1 | 564.3 | . | 595.9 | 526.2 |
| Russian Federation | 158 | 157 | 25.3 | 66.0 | 7.6 | 1.1 | 0.0 | 0.4 | 497.4 | 530.4 | 527.8 | 463.8 | . | 548.7 |
| Slovenia | 66 | 62 | 91.2 | 7.7 | . | 1.1 | 0.0 | 6.0 | 535.7 | 550.0 | . | 416.2 | . | 527.7 |
| Sweden | 155 | 151 | 79.9 | 15.5 | 4.6 | . | 2.0 | 0.0 | 497.7 | 491.1 | 511.0 | . | 478.5 | . |
| International Avg. | 133 | 129 | 71.3 | 22.7 | 5.3 | 1.6 | 0.9 | 1.6 | 496.3 | 496.6 | 513.2 | 474.5 | 550.2 | 451.1 |

Question : Are you a member of <professional organization for physics teachers>?
Location : TQP3-10A (PT2PMPPOP)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 57 | 40.9 | 59.1 | 0.0 | 1.9 | 499.1 | 492.7 | . | 447.2 |
| Iran, Islamic Rep. of | 155 | 154 | 41.8 | 58.2 | 0.0 | 1.2 | 453.3 | 465.5 | . | 411.4 |
| Italy | 115 | 114 | 22.2 | 77.8 | 0.0 | 1.1 | 430.3 | 422.1 | . | 270.8 |
| Lebanon | 239 | 235 | 24.9 | 75.1 | 0.6 | 1.0 | 444.4 | 443.8 | 516.0 | 359.6 |
| Netherlands | 119 | 111 | 73.7 | 26.3 | 5.8 | 1.3 | 583.3 | 582.2 | 576.0 | 573.3 |
| Norway | 129 | 127 | 39.2 | 60.8 | 0.4 | 0.5 | 534.5 | 532.4 | 595.9 | 653.6 |
| Russian Federation | 158 | 158 | 77.6 | 22.4 | 0.0 | 0.0 | 517.6 | 533.8 | . | . |
| Slovenia | 66 | 66 | 47.1 | 52.9 | 0.0 | 0.0 | 536.5 | 533.6 | . | . |
| Sweden | 155 | 151 | 30.3 | 69.7 | 2.0 | 0.0 | 497.5 | 497.2 | 478.5 | . |
| International Avg. | 133 | 130 | 44.2 | 55.8 | 1.0 | 0.8 | 499.6 | 500.4 | 541.6 | 452.6 |

Question : During the past two years, have you regularly participated in activities sponsored by <professional organization for physics teachers>?
 Location : TQP3-10B (PT2PRPPO)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 60.4 | 39.6 | 0.0 | 0.0 | 503.5 | 480.6 | . | . |
| Iran, Islamic Rep. of | 155 | 153 | 33.0 | 67.0 | 0.0 | 0.8 | 445.5 | 467.1 | . | 450.1 |
| Italy | 115 | 114 | 36.8 | 63.2 | 0.0 | 1.1 | 433.3 | 418.5 | . | 270.8 |
| Lebanon | 239 | 238 | 32.6 | 67.4 | 0.0 | 0.3 | 451.8 | 440.3 | . | 279.3 |
| Netherlands | 119 | 109 | 45.6 | 54.4 | 5.8 | 2.7 | 579.5 | 586.2 | 576.0 | 574.1 |
| Norway | 129 | 128 | 6.5 | 93.5 | 0.4 | 0.0 | 525.2 | 534.5 | 595.9 | . |
| Russian Federation | 158 | 156 | 78.1 | 21.9 | 0.0 | 1.2 | 515.9 | 536.7 | . | 589.3 |
| Slovenia | 66 | 66 | 37.9 | 62.1 | 0.0 | 0.0 | 537.9 | 533.2 | . | . |
| Sweden | 155 | 150 | 16.9 | 83.1 | 2.0 | 0.8 | 511.6 | 494.3 | 478.5 | 512.2 |
| International Avg. | 133 | 130 | 38.6 | 61.4 | 0.9 | 0.8 | 500.5 | 499.0 | 550.2 | 446.0 |

Question : In the past two years, have you participated in professional development in physics content?
 Location : TQP3-11A (PT2PPDPT)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 69.1 | 30.9 | 0.0 | 2.8 | 491.6 | 505.6 | . | 443.4 |
| Iran, Islamic Rep. of | 155 | 155 | 61.9 | 38.1 | 0.0 | 0.0 | 442.0 | 488.8 | . | . |
| Italy | 115 | 114 | 48.6 | 51.4 | 0.0 | 1.1 | 434.4 | 414.0 | . | 270.8 |
| Lebanon | 239 | 226 | 36.0 | 64.0 | 0.0 | 5.3 | 449.2 | 440.9 | . | 437.3 |
| Netherlands | 119 | 107 | 41.2 | 58.8 | 5.8 | 5.4 | 586.5 | 580.6 | 576.0 | 580.5 |
| Norway | 129 | 126 | 58.6 | 41.4 | 0.4 | 1.1 | 533.6 | 535.0 | 595.9 | 504.7 |
| Russian Federation | 158 | 157 | 60.0 | 40.0 | 0.0 | 0.3 | 534.5 | 502.0 | . | 449.2 |
| Slovenia | 66 | 62 | 89.2 | 10.8 | 0.0 | 5.4 | 543.7 | 478.6 | . | 505.2 |
| Sweden | 155 | 150 | 62.9 | 37.1 | 2.0 | 0.2 | 496.5 | 498.6 | 478.5 | 513.8 |
| International Avg. | 133 | 128 | 58.6 | 41.4 | 0.9 | 2.4 | 501.3 | 493.8 | 550.2 | 463.1 |

Question : In the past two years, have you participated in professional development in physics pedagogy/instruction?
 Location : TQP3-11B (PT2PPDPP)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 55 | 68.5 | 31.5 | 0.0 | 6.7 | 501.5 | 485.3 | . | 466.8 |
| Iran, Islamic Rep. of | 155 | 154 | 69.8 | 30.2 | 0.0 | 0.4 | 446.4 | 490.7 | . | 480.8 |
| Italy | 115 | 114 | 43.0 | 57.0 | 0.0 | 1.1 | 423.6 | 424.2 | . | 270.8 |
| Lebanon | 239 | 224 | 39.7 | 60.3 | 0.0 | 7.1 | 441.9 | 447.6 | . | 419.9 |
| Netherlands | 119 | 108 | 41.5 | 58.5 | 5.8 | 4.8 | 586.9 | 580.4 | 576.0 | 578.6 |
| Norway | 129 | 126 | 31.4 | 68.6 | 0.4 | 1.1 | 534.0 | 534.3 | 595.9 | 504.7 |
| Russian Federation | 158 | 157 | 69.5 | 30.5 | 0.0 | 0.5 | 523.2 | 513.4 | . | 720.0 |
| Slovenia | 66 | 62 | 81.3 | 18.7 | 0.0 | 5.4 | 545.0 | 500.2 | . | 505.2 |
| Sweden | 155 | 150 | 32.0 | 68.0 | 2.0 | 0.2 | 495.7 | 498.0 | 478.5 | 513.8 |
| International Avg. | 133 | 128 | 53.0 | 47.0 | 0.9 | 3.0 | 499.8 | 497.1 | 550.2 | 495.6 |

Question : In the past two years, have you participated in professional development in physics curriculum?
 Location : TQP3-11C (PT2PPDPC)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 81.1 | 18.9 | 0.0 | 5.1 | 490.4 | 528.6 | . | 435.8 |
| Iran, Islamic Rep. of | 155 | 153 | 40.8 | 59.2 | 0.0 | 0.7 | 452.8 | 464.6 | . | 466.7 |
| Italy | 115 | 114 | 16.3 | 83.7 | 0.0 | 1.1 | 418.1 | 425.1 | . | 270.8 |
| Lebanon | 239 | 224 | 30.3 | 69.7 | 0.0 | 6.5 | 442.3 | 445.7 | . | 427.0 |
| Netherlands | 119 | 107 | 33.5 | 66.5 | 5.8 | 5.6 | 577.9 | 586.2 | 576.0 | 575.2 |
| Norway | 129 | 124 | 46.0 | 54.0 | 0.4 | 2.8 | 534.6 | 533.4 | 595.9 | 530.4 |
| Russian Federation | 158 | 158 | 63.6 | 36.4 | 0.0 | 0.0 | 511.7 | 538.0 | . | . |
| Slovenia | 66 | 62 | 60.4 | 39.6 | 0.0 | 5.4 | 545.4 | 523.2 | . | 505.2 |
| Sweden | 155 | 148 | 16.5 | 83.5 | 2.0 | 1.2 | 487.3 | 499.7 | 478.5 | 470.0 |
| International Avg. | 133 | 127 | 43.2 | 56.8 | 0.9 | 3.2 | 495.6 | 504.9 | 550.2 | 460.1 |

Question : In the past two years, have you participated in professional development in integrating information technology into physics?
 Location : TQP3-11D (PT2PPDPI)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 30.1 | 69.9 | 0.0 | 2.8 | 479.1 | 503.1 | . | 443.4 |
| Iran, Islamic Rep. of | 155 | 154 | 34.1 | 65.9 | 0.0 | 0.7 | 452.1 | 463.6 | . | 485.3 |
| Italy | 115 | 114 | 22.7 | 77.3 | 0.0 | 1.1 | 429.0 | 422.4 | . | 270.8 |
| Lebanon | 239 | 223 | 37.1 | 62.9 | 0.0 | 6.6 | 452.9 | 440.0 | . | 425.6 |
| Netherlands | 119 | 107 | 35.7 | 64.3 | 5.8 | 5.4 | 582.2 | 583.5 | 576.0 | 580.5 |
| Norway | 129 | 124 | 39.8 | 60.2 | 0.4 | 3.0 | 534.4 | 534.6 | 595.9 | 511.9 |
| Russian Federation | 158 | 157 | 78.2 | 21.8 | 0.7 | 0.0 | 525.8 | 498.8 | 708.2 | . |
| Slovenia | 66 | 62 | 69.3 | 30.7 | 0.0 | 5.4 | 541.3 | 526.2 | . | 505.2 |
| Sweden | 155 | 148 | 21.8 | 78.2 | 2.0 | 2.5 | 506.0 | 495.7 | 478.5 | 473.4 |
| International Avg. | 133 | 127 | 41.0 | 59.0 | 1.0 | 3.0 | 500.3 | 496.4 | 589.7 | 462.0 |

Question : In the past two years, have you participated in professional development in improving students' critical thinking or inquiry skills?
 Location : TQP3-11E (PT2PPDIM)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 55 | 45.5 | 54.5 | 0.0 | 4.6 | 490.0 | 503.4 | . | 435.1 |
| Iran, Islamic Rep. of | 155 | 155 | 24.1 | 75.9 | 0.0 | 0.0 | 446.7 | 464.0 | . | . |
| Italy | 115 | 114 | 19.8 | 80.2 | 0.0 | 1.1 | 411.5 | 427.0 | . | 270.8 |
| Lebanon | 239 | 224 | 36.5 | 63.5 | 0.0 | 6.1 | 447.4 | 442.5 | . | 431.0 |
| Netherlands | 119 | 108 | 13.3 | 86.7 | 5.8 | 4.8 | 586.1 | 582.7 | 576.0 | 578.6 |
| Norway | 129 | 126 | 2.3 | 97.7 | 0.4 | 1.1 | 556.3 | 533.7 | 595.9 | 504.7 |
| Russian Federation | 158 | 158 | 36.9 | 63.1 | 0.0 | 0.0 | 517.5 | 523.4 | . | . |
| Slovenia | 66 | 62 | 42.3 | 57.7 | 0.0 | 5.4 | 547.5 | 528.7 | . | 505.2 |
| Sweden | 155 | 149 | 9.5 | 90.5 | 2.0 | 1.0 | 490.9 | 498.3 | 478.5 | 466.4 |
| International Avg. | 133 | 128 | 25.6 | 74.4 | 0.9 | 2.7 | 499.3 | 500.4 | 550.2 | 456.0 |

Question : In the past two years, have you participated in professional development in physics assessment?
 Location : TQP3-11F (PT2PPDPA)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 40.4 | 59.6 | 0.0 | 2.8 | 505.6 | 489.3 | . | 443.4 |
| Iran, Islamic Rep. of | 155 | 155 | 29.5 | 70.5 | 0.0 | 0.0 | 451.1 | 463.5 | . | . |
| Italy | 115 | 114 | 4.5 | 95.5 | 0.0 | 1.1 | 384.6 | 425.8 | . | 270.8 |
| Lebanon | 239 | 227 | 48.8 | 51.2 | 0.0 | 5.2 | 444.4 | 443.4 | . | 437.0 |
| Netherlands | 119 | 108 | 14.7 | 85.3 | 5.8 | 4.8 | 576.8 | 584.2 | 576.0 | 578.6 |
| Norway | 129 | 126 | 11.6 | 88.4 | 0.4 | 1.1 | 536.0 | 534.0 | 595.9 | 504.7 |
| Russian Federation | 158 | 158 | 48.5 | 51.5 | 0.0 | 0.0 | 520.2 | 522.2 | . | . |
| Slovenia | 66 | 62 | 45.7 | 54.3 | 0.0 | 5.4 | 544.1 | 530.4 | . | 505.2 |
| Sweden | 155 | 150 | 23.6 | 76.4 | 2.0 | 0.2 | 498.0 | 497.0 | 478.5 | 513.8 |
| International Avg. | 133 | 128 | 29.7 | 70.3 | 0.9 | 2.3 | 495.6 | 498.9 | 550.2 | 464.8 |

Question : In the past two years, have you attended a workshop or conference in physics?
 Location : TQP3-12A (PT2PAPWC)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 56 | 33.3 | 66.7 | 0.0 | 2.5 | 499.7 | 492.0 | . | 488.5 |
| Iran, Islamic Rep. of | 155 | 155 | 73.3 | 26.7 | 0.0 | 0.0 | 459.1 | 461.9 | . | . |
| Italy | 115 | 114 | 76.1 | 23.9 | 0.0 | 1.1 | 422.6 | 428.0 | . | 270.8 |
| Lebanon | 239 | 235 | 49.5 | 50.5 | 0.0 | 1.3 | 451.7 | 435.6 | . | 438.9 |
| Netherlands | 119 | 112 | 68.7 | 31.3 | 5.8 | 0.0 | 581.3 | 586.4 | 576.0 | . |
| Norway | 129 | 128 | 41.7 | 58.3 | 0.4 | 0.0 | 532.2 | 535.1 | 595.9 | . |
| Russian Federation | 158 | 158 | 85.9 | 14.1 | 0.0 | 0.0 | 524.1 | 503.8 | . | . |
| Slovenia | 66 | 66 | 77.9 | 22.1 | 0.0 | 0.0 | 540.4 | 515.8 | . | . |
| Sweden | 155 | 151 | 58.7 | 41.3 | 2.0 | 0.0 | 492.2 | 504.5 | 478.5 | . |
| International Avg. | 133 | 131 | 62.8 | 37.2 | 0.9 | 0.5 | 500.4 | 495.9 | 550.2 | 399.4 |

Question : In the past two years, have you given a presentation at a workshop or conference in physics?
 Location : TQP3-12B (PT2PAPGP)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 11.2 | 88.8 | 0.0 | 0.0 | 529.9 | 490.0 | . | . |
| Iran, Islamic Rep. of | 155 | 154 | 15.8 | 84.2 | 0.0 | 0.4 | 437.2 | 464.4 | . | 411.3 |
| Italy | 115 | 114 | 18.5 | 81.5 | 0.0 | 1.1 | 425.2 | 423.6 | . | 270.8 |
| Lebanon | 239 | 233 | 24.3 | 75.7 | 0.0 | 2.3 | 455.5 | 439.8 | . | 439.7 |
| Netherlands | 119 | 111 | 14.0 | 86.0 | 5.8 | 1.3 | 587.1 | 582.5 | 576.0 | 565.5 |
| Norway | 129 | 128 | 5.6 | 94.4 | 0.4 | 0.0 | 530.3 | 534.1 | 595.9 | . |
| Russian Federation | 158 | 158 | 58.2 | 41.8 | 0.0 | 0.0 | 527.4 | 512.7 | . | . |
| Slovenia | 66 | 66 | 35.8 | 64.2 | 0.0 | 0.0 | 534.7 | 535.1 | . | . |
| Sweden | 155 | 150 | 2.8 | 97.2 | 2.0 | 0.8 | 474.3 | 498.4 | 478.5 | 455.6 |
| International Avg. | 133 | 130 | 20.7 | 79.3 | 0.9 | 0.7 | 500.2 | 497.8 | 550.2 | 428.6 |

Question : In the past two years, have you published an article in a journal or magazine for teachers in physics?
 Location : TQP3-12C (PT2PAPPA)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 57 | 1.3 | 98.7 | 0.0 | 1.2 | 581.0 | 493.4 | . | 487.5 |
| Iran, Islamic Rep. of | 155 | 155 | 9.6 | 90.4 | 0.0 | 0.0 | 444.7 | 461.5 | . | . |
| Italy | 115 | 114 | 8.0 | 92.0 | 0.0 | 1.1 | 427.9 | 423.6 | . | 270.8 |
| Lebanon | 239 | 236 | 8.8 | 91.2 | 0.0 | 1.1 | 457.7 | 442.0 | . | 458.9 |
| Netherlands | 119 | 112 | 11.3 | 88.7 | 5.8 | 0.0 | 577.7 | 583.6 | 576.0 | . |
| Norway | 129 | 127 | . | 100.0 | 0.4 | 0.7 | . | 534.0 | 595.9 | 511.5 |
| Russian Federation | 158 | 158 | 22.6 | 77.4 | 0.0 | 0.0 | 545.6 | 514.1 | . | . |
| Slovenia | 66 | 65 | 18.3 | 81.7 | 0.0 | 0.8 | 516.3 | 538.9 | . | 564.1 |
| Sweden | 155 | 151 | 3.8 | 96.2 | 2.0 | 0.0 | 480.6 | 498.0 | 478.5 | . |
| International Avg. | 133 | 131 | 10.5 | 90.7 | 0.9 | 0.5 | 503.9 | 498.8 | 550.2 | 458.6 |

Question : In the past two years, have you taken part in an innovative project for curriculum and instruction in physics?
Location : TQP3-12D (PT2PAPIP)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 43.2 | 56.8 | 0.0 | 0.0 | 509.4 | 483.1 | . | . |
| Iran, Islamic Rep. of | 155 | 155 | 24.4 | 75.6 | 0.0 | 0.0 | 487.1 | 451.1 | . | . |
| Italy | 115 | 114 | 29.6 | 70.4 | 0.0 | 1.1 | 420.5 | 425.4 | . | 270.8 |
| Lebanon | 239 | 232 | 17.3 | 82.7 | 0.9 | 2.6 | 446.4 | 442.2 | 419.4 | 471.3 |
| Netherlands | 119 | 112 | 26.6 | 73.4 | 5.8 | 0.0 | 575.9 | 585.4 | 576.0 | . |
| Norway | 129 | 128 | 4.9 | 95.1 | 0.4 | 0.0 | 520.5 | 534.5 | 595.9 | . |
| Russian Federation | 158 | 157 | 36.3 | 63.7 | 0.0 | 0.2 | 539.9 | 510.6 | . | 528.8 |
| Slovenia | 66 | 66 | 43.4 | 56.6 | 0.0 | 0.0 | 535.0 | 534.9 | . | . |
| Sweden | 155 | 151 | 13.1 | 86.9 | 2.0 | 0.0 | 502.1 | 496.6 | 478.5 | . |
| International Avg. | 133 | 130 | 26.5 | 73.5 | 1.0 | 0.4 | 504.1 | 496.0 | 517.5 | 423.7 |

Question : In the past two years, have you exchanged information online about how to teach physics in physics?
 Location : TQP3-12E (PT2PACEX)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 58 | 23.4 | 76.6 | 0.0 | 0.0 | 504.9 | 491.3 | . | . |
| Iran, Islamic Rep. of | 155 | 154 | 53.9 | 46.1 | 0.0 | 0.8 | 464.6 | 451.7 | . | 603.8 |
| Italy | 115 | 114 | 24.8 | 75.2 | 0.0 | 1.1 | 429.8 | 422.0 | . | 270.8 |
| Lebanon | 239 | 233 | 32.1 | 67.9 | 0.0 | 2.3 | 443.8 | 443.5 | . | 439.7 |
| Netherlands | 119 | 112 | 24.2 | 75.8 | 5.8 | 0.0 | 567.6 | 587.8 | 576.0 | . |
| Norway | 129 | 128 | 21.6 | 78.4 | 0.4 | 0.0 | 536.2 | 533.2 | 595.9 | . |
| Russian Federation | 158 | 158 | 24.3 | 75.7 | 0.0 | 0.0 | 528.7 | 518.8 | . | . |
| Slovenia | 66 | 66 | 67.8 | 32.2 | 0.0 | 0.0 | 531.4 | 542.4 | . | . |
| Sweden | 155 | 151 | 18.9 | 81.1 | 2.0 | 0.0 | 499.7 | 496.7 | 478.5 | . |
| International Avg. | 133 | 130 | 32.3 | 67.7 | 0.9 | 0.5 | 500.8 | 498.6 | 550.2 | 438.1 |

Question : Thinking about your current school, to what extent do you feel that it is located in a safe neighborhood?
Location : TQP3-13A (PT2GCUSN)

| Country | Sample | Valid N | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted |
|-----------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | | A LOT | | REE | REE A | Adminis | | A LOT | | REE | REE A | Adminis | |
| | | | % | % | % | % | tered | % | Mean | Mean | Mean | Mean | tered | Mean |
| Armenia | 58 | 54 | 70.6 | 17.4 | 8.3 | 3.7 | 0.0 | 6.3 | 476.6 | 533.5 | 492.7 | 587.6 | . | 532.1 |
| Iran, Islamic Rep. of | 155 | 144 | 56.1 | 43.3 | 0.6 | . | 0.0 | 8.9 | 455.4 | 469.1 | 410.9 | . | . | 447.2 |
| Italy | 115 | 114 | 34.9 | 57.4 | 7.8 | . | 0.0 | 1.1 | 435.0 | 417.9 | 418.9 | . | . | 270.8 |
| Lebanon | 239 | 235 | 57.4 | 31.4 | 8.2 | 3.0 | 0.0 | 1.4 | 453.0 | 429.8 | 434.8 | 404.5 | . | 494.4 |
| Netherlands | 119 | 112 | 60.1 | 37.8 | 2.1 | . | 5.8 | 0.0 | 584.0 | 581.4 | 577.3 | . | 576.0 | . |
| Norway | 129 | 128 | 83.6 | 16.4 | . | . | 0.4 | 0.0 | 536.5 | 520.4 | . | . | 595.9 | . |
| Russian Federation | 158 | 157 | 22.0 | 62.3 | 13.6 | 2.0 | 0.0 | 0.5 | 512.5 | 521.4 | 523.8 | 544.4 | . | 720.0 |
| Slovenia | 66 | 65 | 40.0 | 56.6 | . | 3.4 | 0.0 | 0.8 | 560.1 | 519.4 | . | 482.8 | . | 593.7 |
| Sweden | 155 | 151 | 69.2 | 28.4 | 2.0 | 0.4 | 2.0 | 0.0 | 502.6 | 491.3 | 435.9 | 314.0 | 478.5 | . |
| International Avg. | 133 | 129 | 54.9 | 39.0 | 6.1 | 2.5 | 0.9 | 2.1 | 501.7 | 498.3 | 470.6 | 466.6 | 550.2 | 509.7 |

Question : How safe do you feel at this school?
 Location : TQP3-13B (PT2GCUSA)

| Country | Sample | Valid N | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted |
|-----------------------|--------|---------|------------|---------|----------|-------------------|-----------------------|---------|---------------|---------|-------------|----------------------|--------------------------|---------|
| | | | A LOT % | | REE % | REE A LOT % | Adminis tered % | | A LOT Mean | | REE Mean | REE A LOT Mean | Adminis tered Mean | |
| Armenia | 58 | 57 | 66.8 | 26.5 | 6.7 | . | 0.0 | 2.3 | 480.5 | 512.9 | 549.2 | . | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 151 | 70.5 | 29.5 | . | . | 0.0 | 2.8 | 459.9 | 464.4 | . | . | . | 412.4 |
| Italy | 115 | 114 | 30.6 | 59.6 | 8.0 | 1.7 | 0.0 | 1.1 | 428.1 | 424.2 | 424.2 | 336.1 | . | 270.8 |
| Lebanon | 239 | 238 | 68.6 | 27.6 | 2.9 | 1.0 | 0.0 | 0.3 | 449.3 | 430.0 | 419.1 | 482.0 | . | 480.0 |
| Netherlands | 119 | 112 | 64.8 | 34.0 | 1.2 | . | 5.8 | 0.0 | 590.4 | 569.1 | 570.2 | . | 576.0 | . |
| Norway | 129 | 128 | 86.5 | 13.5 | . | . | 0.4 | 0.0 | 538.1 | 506.9 | . | . | 595.9 | . |
| Russian Federation | 158 | 157 | 34.3 | 63.0 | 2.8 | . | 0.0 | 0.5 | 526.1 | 515.8 | 548.8 | . | . | 720.0 |
| Slovenia | 66 | 65 | 53.3 | 38.1 | 6.7 | 1.9 | 0.0 | 0.8 | 554.3 | 511.0 | 512.3 | 527.7 | . | 593.7 |
| Sweden | 155 | 151 | 83.8 | 16.2 | . | . | 2.0 | 0.0 | 500.6 | 480.2 | . | . | 478.5 | . |
| International Avg. | 133 | 130 | 62.1 | 34.2 | 4.7 | 1.5 | 0.9 | 0.9 | 503.0 | 490.5 | 504.0 | 448.6 | 550.2 | 500.6 |

Question : To what extent do you feel that this school's security policies and practices are sufficient?
Location : TQP3-13C (PT2GCUSP)

| Country | Sample | Valid N | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted | 1.AGREE | 2.AGREE | 3.DISAG | 4.DISAG | Not | Omitted |
|-----------------------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | | | A LOT | | REE | REE A | Adminis | | A LOT | | REE | REE A | Adminis | |
| | | | % | % | % | LOT | tered | % | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 57 | 52.7 | 40.7 | 3.4 | 3.2 | 0.0 | 2.3 | 480.3 | 508.4 | 512.2 | 506.7 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 148 | 57.1 | 42.9 | . | . | 0.0 | 5.4 | 455.5 | 472.6 | . | . | . | 407.6 |
| Italy | 115 | 114 | 23.5 | 61.5 | 13.3 | 1.7 | 0.0 | 1.1 | 437.0 | 429.5 | 386.4 | 336.1 | . | 270.8 |
| Lebanon | 239 | 238 | 60.3 | 34.6 | 3.1 | 2.0 | 0.0 | 0.3 | 449.7 | 434.3 | 437.1 | 423.1 | . | 480.0 |
| Netherlands | 119 | 112 | 43.8 | 51.1 | 5.1 | . | 5.8 | 0.0 | 591.2 | 579.9 | 541.5 | . | 576.0 | . |
| Norway | 129 | 128 | 66.1 | 33.2 | 0.7 | . | 0.4 | 0.0 | 537.6 | 526.8 | 511.5 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 32.1 | 62.6 | 4.2 | 1.1 | 0.0 | 0.0 | 543.3 | 512.8 | 511.6 | 399.7 | . | . |
| Slovenia | 66 | 64 | 30.5 | 61.1 | 7.2 | 1.2 | 0.0 | 1.9 | 553.2 | 531.2 | 491.7 | 473.0 | . | 563.9 |
| Sweden | 155 | 150 | 62.3 | 33.2 | 4.5 | . | 2.0 | 0.6 | 502.7 | 489.3 | 480.2 | . | 478.5 | 508.8 |
| International Avg. | 133 | 130 | 47.6 | 46.8 | 5.2 | 1.8 | 0.9 | 1.3 | 505.6 | 498.3 | 484.0 | 427.7 | 550.2 | 459.6 |

Question : How severely does the school building need significant repair?
 Location : TQP3-14A (PT2GSPBR)

| Country | Sample | Valid N | 1.NOT A PROBLEM % | 2.MINOR PROBLEM % | 3.SERIO US PROBLEM % | Not Adminis tered % | Omitted % | 1.NOT A PROBLEM Mean | 2.MINOR PROBLEM Mean | 3.SERIO US PROBLEM Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------------|-------------------------|-------------------------------|------------------------------|--------------|-------------------------------|----------------------------|----------------------------------|---------------------------------|-----------------|
| Armenia | 58 | 52 | 16.2 | 46.9 | 36.9 | 0.0 | 10.5 | 492.2 | 491.1 | 502.5 | . | 485.6 |
| Iran, Islamic Rep. of | 155 | 151 | 55.3 | 33.2 | 11.5 | 0.0 | 3.9 | 470.2 | 446.3 | 449.0 | . | 461.2 |
| Italy | 115 | 114 | 46.7 | 36.8 | 16.5 | 0.0 | 1.1 | 439.4 | 425.0 | 377.5 | . | 270.8 |
| Lebanon | 239 | 238 | 59.2 | 36.9 | 3.9 | 0.0 | 0.5 | 446.5 | 440.9 | 434.8 | . | 343.6 |
| Netherlands | 119 | 111 | 40.2 | 39.2 | 20.6 | 5.8 | 1.4 | 585.7 | 582.3 | 578.6 | 576.0 | 584.2 |
| Norway | 129 | 126 | 50.4 | 36.0 | 13.6 | 0.4 | 1.8 | 535.1 | 531.2 | 535.7 | 595.9 | 539.4 |
| Russian Federation | 158 | 156 | 27.1 | 47.1 | 25.9 | 0.0 | 1.1 | 500.3 | 538.4 | 513.6 | . | 481.8 |
| Slovenia | 66 | 64 | 36.4 | 51.6 | 12.0 | 0.0 | 2.8 | 529.6 | 531.6 | 558.6 | . | 564.6 |
| Sweden | 155 | 151 | 50.2 | 36.4 | 13.4 | 2.0 | 0.0 | 501.7 | 494.9 | 487.5 | 478.5 | . |
| International Avg. | 133 | 129 | 42.4 | 40.4 | 17.1 | 0.9 | 2.6 | 500.1 | 498.0 | 493.1 | 550.2 | 466.4 |

Question : How severe of a problem is overcrowded classrooms?
 Location : TQP3-14B (PT2GSPCO)

| Country | Sample | Valid N | 1.NOT A PROBLEM % | 2.MINOR PROBLEM % | 3.SERIO US PROBLEM % | Not Adminis tered % | Omitted % | 1.NOT A PROBLEM Mean | 2.MINOR PROBLEM Mean | 3.SERIO US PROBLEM Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------------|-------------------------|-------------------------------|------------------------------|--------------|-------------------------------|----------------------------|----------------------------------|---------------------------------|-----------------|
| Armenia | 58 | 50 | 37.4 | 30.1 | 32.4 | 0.0 | 12.6 | 482.5 | 519.6 | 484.8 | . | 494.4 |
| Iran, Islamic Rep. of | 155 | 153 | 55.0 | 25.2 | 19.8 | 0.0 | 2.3 | 469.4 | 451.7 | 437.2 | . | 514.6 |
| Italy | 115 | 114 | 31.7 | 37.5 | 30.8 | 0.0 | 1.1 | 433.4 | 415.1 | 425.0 | . | 270.8 |
| Lebanon | 239 | 227 | 58.5 | 32.7 | 8.8 | 0.0 | 5.0 | 447.9 | 437.5 | 440.1 | . | 437.7 |
| Netherlands | 119 | 112 | 28.3 | 46.2 | 25.4 | 5.8 | 0.0 | 578.7 | 590.9 | 573.0 | 576.0 | . |
| Norway | 129 | 126 | 31.8 | 53.2 | 15.0 | 0.4 | 1.8 | 529.1 | 534.8 | 539.9 | 595.9 | 539.4 |
| Russian Federation | 158 | 158 | 68.9 | 27.3 | 3.8 | 0.0 | 0.0 | 515.3 | 532.9 | 545.0 | . | . |
| Slovenia | 66 | 64 | 22.4 | 49.9 | 27.6 | 0.0 | 2.3 | 533.9 | 523.2 | 557.4 | . | 531.0 |
| Sweden | 155 | 151 | 35.3 | 50.8 | 13.9 | 2.0 | 0.0 | 495.5 | 497.8 | 499.8 | 478.5 | . |
| International Avg. | 133 | 128 | 41.0 | 39.2 | 19.7 | 0.9 | 2.8 | 498.4 | 500.4 | 500.2 | 550.2 | 464.7 |

Question : How severe of a problem is inadequate workspace for teachers outside their classrooms?
 Location : TQP3-14C (PT2GSPWO)

| Country | Sample | Valid N | 1.NOT A PROBLEM % | 2.MINOR PROBLEM % | 3.SERIO US PROBLEM % | Not Adminis tered % | Omitted % | 1.NOT A PROBLEM Mean | 2.MINOR PROBLEM Mean | 3.SERIO US PROBLEM Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------------|-------------------------|-------------------------------|------------------------------|--------------|-------------------------------|----------------------------|----------------------------------|---------------------------------|-----------------|
| Armenia | 58 | 56 | 36.3 | 49.2 | 14.6 | 0.0 | 4.4 | 481.6 | 509.3 | 469.9 | . | 514.7 |
| Iran, Islamic Rep. of | 155 | 153 | 53.6 | 27.3 | 19.1 | 0.0 | 2.3 | 465.9 | 457.8 | 438.9 | . | 514.6 |
| Italy | 115 | 114 | 23.8 | 35.8 | 40.4 | 0.0 | 1.1 | 426.7 | 411.8 | 433.1 | . | 270.8 |
| Lebanon | 239 | 237 | 55.9 | 28.6 | 15.5 | 0.0 | 0.9 | 447.6 | 448.4 | 429.2 | . | 284.1 |
| Netherlands | 119 | 112 | 19.0 | 39.4 | 41.6 | 5.8 | 0.0 | 576.4 | 589.6 | 579.5 | 576.0 | . |
| Norway | 129 | 126 | 45.9 | 37.2 | 16.9 | 0.4 | 1.8 | 533.9 | 534.8 | 531.1 | 595.9 | 539.4 |
| Russian Federation | 158 | 158 | 50.0 | 39.6 | 10.4 | 0.0 | 0.0 | 519.4 | 507.8 | 581.5 | . | . |
| Slovenia | 66 | 65 | 41.8 | 36.9 | 21.3 | 0.0 | 0.8 | 522.5 | 555.5 | 521.7 | . | 593.7 |
| Sweden | 155 | 151 | 54.8 | 35.6 | 9.7 | 2.0 | 0.0 | 497.5 | 498.4 | 492.3 | 478.5 | . |
| International Avg. | 133 | 130 | 42.3 | 36.6 | 21.0 | 0.9 | 1.3 | 496.8 | 501.5 | 497.5 | 550.2 | 452.9 |

Question : How severe of a problem is unavailable materials to conduct physics experiments or investigations?
Location : TQP3-14D (PT2GSPME)

| Country | Sample | Valid N | 1.NOT A PROBLEM % | 2.MINOR PROBLEM % | 3.SERIO US PROBLEM % | Not Adminis tered % | Omitted % | 1.NOT A PROBLEM Mean | 2.MINOR PROBLEM Mean | 3.SERIO US PROBLEM Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------------|-------------------------|-------------------------------|------------------------------|--------------|-------------------------------|----------------------------|----------------------------------|---------------------------------|-----------------|
| Armenia | 58 | 56 | 15.0 | 44.9 | 40.1 | 0.0 | 4.4 | 500.6 | 501.6 | 481.8 | . | 514.7 |
| Iran, Islamic Rep. of | 155 | 153 | 18.2 | 35.1 | 46.6 | 0.0 | 2.3 | 477.9 | 487.9 | 428.9 | . | 514.6 |
| Italy | 115 | 114 | 37.3 | 44.6 | 18.1 | 0.0 | 1.1 | 434.0 | 422.2 | 407.2 | . | 270.8 |
| Lebanon | 239 | 238 | 45.8 | 34.2 | 19.9 | 0.0 | 0.5 | 452.7 | 437.3 | 435.3 | . | 343.6 |
| Netherlands | 119 | 111 | 44.4 | 47.6 | 8.0 | 5.8 | 0.6 | 585.7 | 578.9 | 590.2 | 576.0 | 591.3 |
| Norway | 129 | 126 | 37.2 | 53.0 | 9.8 | 0.4 | 1.8 | 532.0 | 532.8 | 545.8 | 595.9 | 539.4 |
| Russian Federation | 158 | 157 | 25.8 | 48.3 | 25.9 | 0.0 | 0.3 | 547.8 | 511.8 | 513.3 | . | 449.2 |
| Slovenia | 66 | 65 | 40.9 | 46.0 | 13.1 | 0.0 | 0.8 | 548.3 | 522.2 | 534.6 | . | 593.7 |
| Sweden | 155 | 151 | 54.5 | 40.3 | 5.2 | 2.0 | 0.0 | 498.6 | 500.0 | 462.7 | 478.5 | . |
| International Avg. | 133 | 130 | 35.5 | 43.8 | 20.7 | 0.9 | 1.3 | 508.6 | 499.4 | 488.9 | 550.2 | 477.2 |

Question : How would you characterize teachers' job satisfaction within your school?
Location : TQP3-15A (PT2GCHTS)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 3.6 | 36.3 | 53.2 | 6.9 | . | 0.0 | 2.3 | 429.8 | 489.1 | 487.6 | 598.3 | . | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 154 | 19.8 | 30.6 | 28.1 | 15.8 | 5.7 | 0.0 | 0.6 | 464.4 | 465.6 | 437.2 | 484.0 | 461.3 | . | 426.8 |
| Italy | 115 | 114 | 1.5 | 12.9 | 67.2 | 15.3 | 3.0 | 0.0 | 1.1 | 480.2 | 434.0 | 420.1 | 435.9 | 376.6 | . | 270.8 |
| Lebanon | 239 | 237 | 30.6 | 46.6 | 21.0 | 1.1 | 0.6 | 0.0 | 0.8 | 450.7 | 447.1 | 429.8 | 353.2 | 353.8 | . | 520.2 |
| Netherlands | 119 | 111 | 4.6 | 32.3 | 58.5 | 4.6 | . | 5.8 | 1.4 | 570.0 | 592.8 | 578.3 | 572.6 | . | 576.0 | 619.8 |
| Norway | 129 | 124 | 17.4 | 59.2 | 22.3 | 1.1 | . | 0.4 | 3.2 | 541.8 | 526.5 | 548.1 | 508.9 | . | 595.9 | 535.0 |
| Russian Federation | 158 | 158 | 3.5 | 42.6 | 52.0 | 1.9 | . | 0.0 | 0.0 | 603.5 | 525.5 | 513.2 | 497.0 | . | . | . |
| Slovenia | 66 | 64 | 7.2 | 23.4 | 65.5 | 3.9 | . | 0.0 | 2.8 | 582.6 | 544.9 | 529.6 | 456.4 | . | . | 564.6 |
| Sweden | 155 | 149 | 15.2 | 43.1 | 35.4 | 5.9 | 0.4 | 2.0 | 1.6 | 509.6 | 506.9 | 486.3 | 468.5 | 428.8 | 478.5 | 489.2 |
| International Avg. | 133 | 130 | 11.5 | 36.3 | 44.8 | 6.3 | 2.4 | 0.9 | 1.5 | 514.7 | 503.6 | 492.2 | 486.1 | 405.1 | 550.2 | 494.2 |

Question : How would you characterize teachers' understanding of the school's curricular goals within your school?
Location : TQP3-15B (PT2GCHTU)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 21.9 | 61.5 | 16.6 | . | . | 0.0 | 2.3 | 483.1 | 498.9 | 488.2 | . | . | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 155 | 23.6 | 47.9 | 25.5 | 2.1 | 1.0 | 0.0 | 0.0 | 453.3 | 452.9 | 475.2 | 464.8 | 547.0 | . | . |
| Italy | 115 | 114 | 4.2 | 35.2 | 48.8 | 11.1 | 0.7 | 0.0 | 1.1 | 416.4 | 429.6 | 428.5 | 393.2 | 355.4 | . | 270.8 |
| Lebanon | 239 | 238 | 45.4 | 39.0 | 14.4 | 1.3 | . | 0.0 | 0.4 | 454.2 | 439.9 | 421.9 | 391.3 | . | . | 523.9 |
| Netherlands | 119 | 110 | 0.6 | 18.2 | 66.9 | 14.3 | . | 5.8 | 2.4 | 518.9 | 585.1 | 583.9 | 573.0 | . | 576.0 | 612.4 |
| Norway | 129 | 122 | 12.0 | 67.4 | 19.9 | 0.8 | . | 0.4 | 5.4 | 540.7 | 531.0 | 539.1 | 511.5 | . | 595.9 | 538.1 |
| Russian Federation | 158 | 158 | 13.1 | 70.8 | 16.2 | . | . | 0.0 | 0.0 | 576.6 | 510.9 | 521.8 | . | . | . | . |
| Slovenia | 66 | 63 | 8.2 | 44.5 | 44.8 | . | 2.5 | 0.0 | 4.2 | 577.3 | 537.9 | 529.3 | . | 427.9 | . | 543.7 |
| Sweden | 155 | 150 | 10.5 | 45.1 | 41.1 | 2.8 | 0.6 | 2.0 | 0.0 | 497.3 | 502.0 | 493.0 | 483.9 | 503.9 | 478.5 | 474.7 |
| International Avg. | 133 | 130 | 15.5 | 47.7 | 32.7 | 5.4 | 1.2 | 0.9 | 1.8 | 502.0 | 498.7 | 497.9 | 469.6 | 458.6 | 550.2 | 498.6 |

Question : How would you characterize teachers' degree of success in implementing the school's curriculum within your school?
Location : TQP3-15C (PT2GCHDS)

| Country | Sample | Valid N | 1.VERY | 2.HIGH | 3.MEDIU | 4.LOW | 5.VERY | Not | Omitted | 1.VERY | 2.HIGH | 3.MEDIU | 4.LOW | 5.VERY | Not | Omitted |
|-----------------------|--------|---------|--------|--------|---------|-------|--------|---------|---------|--------|--------|---------|-------|--------|---------|---------|
| | | | HIGH | % | M | % | LOW | Adminis | | HIGH | Mean | M | Mean | LOW | Adminis | |
| | | | % | % | % | % | % | tered | | Mean | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 55 | 14.4 | 48.1 | 35.6 | 1.8 | . | 0.0 | 4.6 | 462.0 | 489.0 | 517.4 | 442.2 | . | . | 496.1 |
| Iran, Islamic Rep. of | 155 | 154 | 17.7 | 62.9 | 17.5 | 1.8 | . | 0.0 | 0.3 | 459.5 | 453.9 | 481.6 | 470.3 | . | . | 403.3 |
| Italy | 115 | 114 | 1.8 | 18.1 | 67.9 | 9.5 | 2.7 | 0.0 | 1.1 | 433.2 | 426.1 | 423.2 | 452.4 | 323.3 | . | 270.8 |
| Lebanon | 239 | 238 | 34.6 | 43.1 | 21.3 | 0.8 | 0.3 | 0.0 | 0.4 | 458.6 | 436.1 | 436.0 | 355.4 | 411.3 | . | 523.9 |
| Netherlands | 119 | 110 | . | 9.5 | 71.8 | 17.3 | 1.4 | 5.8 | 2.4 | . | 586.2 | 582.6 | 578.7 | 573.3 | 576.0 | 612.4 |
| Norway | 129 | 122 | 3.9 | 59.6 | 35.8 | 0.8 | . | 0.4 | 4.5 | 555.4 | 537.2 | 528.1 | 511.5 | . | 595.9 | 520.9 |
| Russian Federation | 158 | 157 | 4.1 | 63.3 | 32.7 | . | . | 0.0 | 0.3 | 544.5 | 538.0 | 486.0 | . | . | . | 507.7 |
| Slovenia | 66 | 64 | 12.5 | 36.0 | 50.3 | 1.2 | . | 0.0 | 2.8 | 579.3 | 545.9 | 518.1 | 385.6 | . | . | 564.6 |
| Sweden | 155 | 149 | 13.0 | 48.7 | 36.6 | 1.7 | . | 2.0 | 1.6 | 524.9 | 501.7 | 485.9 | 415.0 | . | 478.5 | 489.2 |
| International Avg. | 133 | 129 | 12.7 | 43.2 | 41.1 | 4.4 | 1.5 | 0.9 | 2.0 | 502.2 | 501.6 | 495.4 | 451.4 | 436.0 | 550.2 | 487.7 |

Question : How would you characterize teachers' expectations for student achievement within your school?
 Location : TQP3-15D (PT2GCHTE)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 5.2 | 26.6 | 55.6 | 12.5 | . | 0.0 | 2.3 | 465.0 | 494.8 | 502.2 | 465.5 | . | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 154 | 12.6 | 47.6 | 32.1 | 6.6 | 1.1 | 0.0 | 0.6 | 496.7 | 470.0 | 435.2 | 428.3 | 393.8 | . | 684.7 |
| Italy | 115 | 114 | 2.4 | 32.5 | 47.8 | 15.2 | 2.0 | 0.0 | 1.1 | 397.3 | 429.0 | 435.6 | 395.7 | 311.9 | . | 270.8 |
| Lebanon | 239 | 230 | 15.1 | 43.9 | 37.3 | 3.4 | 0.4 | 0.0 | 2.9 | 468.0 | 444.4 | 435.6 | 440.6 | 337.6 | . | 421.9 |
| Netherlands | 119 | 110 | . | 37.9 | 56.4 | 4.7 | 1.0 | 5.8 | 2.4 | . | 583.5 | 582.6 | 568.6 | 569.2 | 576.0 | 612.4 |
| Norway | 129 | 121 | 10.3 | 53.7 | 34.9 | 1.1 | . | 0.4 | 5.6 | 540.8 | 535.5 | 532.2 | 485.5 | . | 595.9 | 526.3 |
| Russian Federation | 158 | 157 | 2.3 | 41.4 | 53.9 | 1.5 | 0.9 | 0.0 | 0.9 | 563.8 | 535.5 | 515.5 | 475.4 | 320.5 | . | 379.8 |
| Slovenia | 66 | 65 | 11.2 | 47.0 | 34.0 | 4.5 | 3.3 | 0.0 | 0.8 | 566.8 | 543.7 | 522.5 | 480.3 | 491.4 | . | 593.7 |
| Sweden | 155 | 150 | 11.7 | 45.5 | 40.2 | 2.1 | 0.4 | 2.0 | 0.0 | 508.0 | 509.6 | 485.5 | 409.1 | 428.8 | 478.5 | 474.7 |
| International Avg. | 133 | 129 | 8.9 | 41.8 | 43.6 | 5.7 | 1.3 | 0.9 | 1.8 | 500.8 | 505.1 | 494.1 | 461.0 | 407.6 | 550.2 | 499.0 |

Question : How would you characterize support for teachers' professional development within your school?
 Location : TQP3-15E (PT2GCHPD)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 11.8 | 49.7 | 29.4 | 6.1 | 3.0 | 0.0 | 2.3 | 455.6 | 505.9 | 482.9 | 512.5 | 510.4 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 155 | 12.3 | 24.3 | 37.5 | 10.8 | 15.0 | 0.0 | 0.0 | 493.3 | 480.8 | 443.0 | 451.1 | 447.1 | . | . |
| Italy | 115 | 114 | . | 12.7 | 44.9 | 32.9 | 9.5 | 0.0 | 1.1 | . | 437.2 | 424.4 | 425.2 | 399.5 | . | 270.8 |
| Lebanon | 239 | 228 | 19.1 | 38.0 | 32.9 | 8.4 | 1.6 | 0.0 | 3.7 | 451.6 | 446.8 | 437.8 | 439.6 | 442.0 | . | 429.1 |
| Netherlands | 119 | 110 | 3.1 | 26.6 | 48.6 | 19.9 | 1.8 | 5.8 | 2.4 | 608.7 | 588.9 | 583.1 | 567.4 | 572.5 | 576.0 | 612.4 |
| Norway | 129 | 123 | 1.3 | 22.2 | 53.5 | 20.7 | 2.2 | 0.4 | 3.8 | 514.3 | 528.0 | 539.0 | 530.6 | 524.1 | 595.9 | 526.2 |
| Russian Federation | 158 | 157 | 12.2 | 53.0 | 34.1 | 0.7 | . | 0.0 | 0.8 | 523.7 | 530.2 | 505.2 | 531.4 | . | . | 567.0 |
| Slovenia | 66 | 65 | 12.3 | 48.6 | 35.5 | 3.5 | . | 0.0 | 0.8 | 554.9 | 534.5 | 526.4 | 545.7 | . | . | 593.7 |
| Sweden | 155 | 150 | 1.8 | 11.0 | 40.3 | 33.4 | 13.5 | 2.0 | 0.0 | 535.0 | 510.4 | 497.0 | 496.3 | 485.1 | 478.5 | 474.7 |
| International Avg. | 133 | 129 | 9.3 | 31.8 | 39.6 | 15.2 | 6.7 | 0.9 | 1.6 | 517.1 | 506.9 | 493.2 | 500.0 | 483.0 | 550.2 | 500.1 |

Question : How would you characterize parental support for student achievement within your school?
 Location : TQP3-15F (PT2GCHPS)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 4.1 | 9.2 | 51.6 | 23.8 | 11.3 | 0.0 | 2.3 | 465.3 | 442.7 | 499.1 | 492.7 | 523.0 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 155 | 9.6 | 20.3 | 42.2 | 19.3 | 8.6 | 0.0 | 0.0 | 512.6 | 498.3 | 458.0 | 422.7 | 402.9 | . | . |
| Italy | 115 | 114 | 1.7 | 15.2 | 49.1 | 30.6 | 3.3 | 0.0 | 1.1 | 424.8 | 423.3 | 422.6 | 420.0 | 482.5 | . | 270.8 |
| Lebanon | 239 | 231 | 11.8 | 18.7 | 36.1 | 25.7 | 7.7 | 0.0 | 3.3 | 447.2 | 462.9 | 445.1 | 432.4 | 409.8 | . | 467.6 |
| Netherlands | 119 | 109 | 0.2 | 14.2 | 65.1 | 20.5 | . | 5.8 | 3.3 | 632.1 | 588.8 | 581.6 | 580.2 | . | 576.0 | 595.2 |
| Norway | 129 | 120 | . | 14.7 | 48.6 | 33.1 | 3.6 | 0.4 | 6.2 | . | 525.6 | 536.5 | 535.5 | 536.6 | 595.9 | 523.2 |
| Russian Federation | 158 | 157 | 1.2 | 12.6 | 57.0 | 25.6 | 3.6 | 0.1 | 0.0 | 567.7 | 556.5 | 527.4 | 496.5 | 458.6 | 576.8 | . |
| Slovenia | 66 | 64 | 1.7 | 18.4 | 60.5 | 19.3 | 0.1 | 0.0 | 2.8 | 582.5 | 592.9 | 521.4 | 513.6 | 517.7 | . | 564.6 |
| Sweden | 155 | 148 | 0.5 | 26.7 | 46.0 | 20.4 | 6.5 | 2.0 | 2.1 | 505.6 | 507.6 | 497.7 | 484.0 | 494.4 | 478.5 | 494.4 |
| International Avg. | 133 | 128 | 3.8 | 16.7 | 50.7 | 24.3 | 5.6 | 0.9 | 2.3 | 517.2 | 511.0 | 498.8 | 486.4 | 478.2 | 556.8 | 491.8 |

Question : How would you characterize parental involvement in school activities within your school?
 Location : TQP3-15G (PT2GCHPI)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | . | 17.9 | 55.5 | 20.8 | 5.9 | 0.0 | 2.3 | . | 490.2 | 490.3 | 520.7 | 441.0 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 153 | 3.1 | 11.7 | 36.6 | 31.2 | 17.3 | 0.0 | 1.2 | 489.6 | 482.3 | 477.1 | 451.7 | 419.9 | . | 429.1 |
| Italy | 115 | 114 | 0.5 | 19.2 | 41.7 | 31.4 | 7.1 | 0.0 | 1.1 | 433.8 | 419.9 | 438.4 | 402.2 | 445.1 | . | 270.8 |
| Lebanon | 239 | 230 | 5.7 | 16.6 | 34.0 | 29.2 | 14.6 | 0.0 | 4.2 | 475.3 | 457.4 | 438.2 | 448.2 | 419.9 | . | 438.7 |
| Netherlands | 119 | 110 | 2.6 | 19.2 | 62.7 | 15.2 | 0.3 | 5.8 | 2.4 | 581.4 | 583.2 | 585.3 | 568.8 | 523.3 | 576.0 | 612.4 |
| Norway | 129 | 120 | . | 5.8 | 38.0 | 40.1 | 16.1 | 0.4 | 6.2 | . | 534.7 | 532.3 | 536.7 | 534.7 | 595.9 | 523.2 |
| Russian Federation | 158 | 158 | 5.7 | 18.6 | 55.0 | 18.9 | 1.7 | 0.0 | 0.0 | 549.9 | 528.8 | 521.8 | 511.1 | 437.7 | . | . |
| Slovenia | 66 | 64 | 1.7 | 12.1 | 44.1 | 34.1 | 8.1 | 0.0 | 2.8 | 582.5 | 549.1 | 557.5 | 497.7 | 527.2 | . | 564.6 |
| Sweden | 155 | 149 | . | 10.3 | 31.0 | 36.7 | 21.9 | 2.0 | 0.6 | . | 503.4 | 497.9 | 503.6 | 482.8 | 478.5 | 507.3 |
| International Avg. | 133 | 128 | 3.2 | 14.6 | 44.3 | 28.6 | 10.3 | 0.9 | 2.3 | 518.7 | 505.4 | 504.3 | 493.4 | 470.2 | 550.2 | 484.1 |

Question : How would you characterize students' regard for school property within your school?
Location : TQP3-15H (PT2GCHSR)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 3.6 | 19.2 | 49.9 | 19.7 | 7.6 | 0.0 | 2.3 | 429.8 | 484.3 | 497.7 | 522.6 | 446.7 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 155 | 6.7 | 26.7 | 44.5 | 16.4 | 5.6 | 0.0 | 0.0 | 469.9 | 477.6 | 462.4 | 428.7 | 434.4 | . | . |
| Italy | 115 | 114 | 2.3 | 22.6 | 52.2 | 18.7 | 4.1 | 0.0 | 1.1 | 386.1 | 443.1 | 424.2 | 413.2 | 385.5 | . | 270.8 |
| Lebanon | 239 | 231 | 14.6 | 28.3 | 42.3 | 11.1 | 3.8 | 0.0 | 2.9 | 460.9 | 463.5 | 432.4 | 434.1 | 404.0 | . | 413.1 |
| Netherlands | 119 | 110 | 0.5 | 22.1 | 58.5 | 17.9 | 1.0 | 5.8 | 2.4 | 655.0 | 590.6 | 584.8 | 560.0 | 600.0 | 576.0 | 612.4 |
| Norway | 129 | 123 | 1.8 | 33.0 | 53.1 | 12.2 | . | 0.4 | 3.8 | 563.3 | 534.5 | 534.7 | 526.9 | . | 595.9 | 526.2 |
| Russian Federation | 158 | 158 | 3.2 | 23.8 | 58.7 | 10.3 | 4.0 | 0.0 | 0.0 | 554.9 | 534.1 | 519.1 | 509.3 | 480.2 | . | . |
| Slovenia | 66 | 65 | 4.0 | 11.1 | 63.7 | 18.6 | 2.7 | 0.0 | 0.8 | 536.0 | 546.0 | 541.6 | 509.2 | 490.6 | . | 593.7 |
| Sweden | 155 | 149 | 8.3 | 32.1 | 51.4 | 6.8 | 1.4 | 2.0 | 0.6 | 511.8 | 510.6 | 489.9 | 475.3 | 481.4 | 478.5 | 507.3 |
| International Avg. | 133 | 129 | 5.0 | 24.3 | 52.7 | 14.7 | 3.8 | 0.9 | 1.5 | 507.5 | 509.4 | 498.5 | 486.6 | 465.3 | 550.2 | 492.9 |

Question : How would you characterize students' desire to do well within your school?
Location : TQP3-15I (PT2GCHSD)

| Country | Sample | Valid N | 1.VERY HIGH % | 2.HIGH % | 3.MEDIU M % | 4.LOW % | 5.VERY LOW % | Not Adminis tered % | Omitted % | 1.VERY HIGH Mean | 2.HIGH Mean | 3.MEDIU M Mean | 4.LOW Mean | 5.VERY LOW Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------|-------------|-------------------|------------|--------------------|------------------------------|--------------|------------------------|----------------|----------------------|---------------|-----------------------|---------------------------------|-----------------|
| Armenia | 58 | 57 | 1.3 | 17.2 | 67.3 | 6.8 | 7.4 | 0.0 | 2.3 | 581.0 | 487.5 | 503.7 | 444.4 | 447.4 | . | 526.8 |
| Iran, Islamic Rep. of | 155 | 155 | 18.8 | 40.2 | 32.1 | 4.8 | 4.2 | 0.0 | 0.0 | 524.6 | 480.4 | 416.2 | 400.0 | 374.3 | . | . |
| Italy | 115 | 114 | 6.5 | 25.1 | 52.9 | 10.6 | 5.0 | 0.0 | 1.1 | 454.3 | 442.1 | 425.4 | 385.0 | 360.0 | . | 270.8 |
| Lebanon | 239 | 235 | 14.7 | 37.3 | 40.7 | 6.8 | 0.5 | 0.0 | 1.0 | 452.7 | 456.8 | 437.1 | 403.6 | 309.7 | . | 418.4 |
| Netherlands | 119 | 110 | . | 26.2 | 49.7 | 20.6 | 3.4 | 5.8 | 2.4 | . | 591.7 | 585.7 | 563.5 | 569.0 | 576.0 | 612.4 |
| Norway | 129 | 121 | 7.1 | 54.7 | 36.6 | 1.7 | . | 0.4 | 5.6 | 532.0 | 538.0 | 530.7 | 501.4 | . | 595.9 | 526.3 |
| Russian Federation | 158 | 158 | 2.4 | 23.1 | 57.6 | 14.5 | 2.4 | 0.0 | 0.0 | 564.6 | 570.2 | 516.6 | 471.5 | 416.0 | . | . |
| Slovenia | 66 | 65 | 5.1 | 15.5 | 64.2 | 15.1 | 0.1 | 0.0 | 0.8 | 577.0 | 561.7 | 526.7 | 525.3 | 517.7 | . | 593.7 |
| Sweden | 155 | 149 | 15.2 | 45.0 | 37.7 | 1.8 | 0.4 | 2.0 | 0.6 | 517.3 | 508.9 | 477.6 | 463.8 | 428.8 | 478.5 | 507.3 |
| International Avg. | 133 | 129 | 8.9 | 31.6 | 48.7 | 9.2 | 2.9 | 0.9 | 1.5 | 525.4 | 515.3 | 491.1 | 462.1 | 427.9 | 550.2 | 493.7 |

Question : How many students are in the TIMSS class?
 Location : TQP3-16 (PT2PSTUD)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|------|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 42 | 0.0 | 29.7 | 25.1 | 25.0 | 11.0 | 16.0 | 18.0 | 23.0 | 25.0 | 29.0 | 31.0 | 34.0 | 34.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 32.1 | 25.0 | 7.0 | 12.0 | 17.0 | 23.0 | 30.0 | 44.0 | 52.0 | 55.0 | 60.0 |
| Italy | 115 | 114 | 1.1 | 0.0 | 21.1 | 18.0 | 10.0 | 15.0 | 16.0 | 18.0 | 21.0 | 24.0 | 25.0 | 26.0 | 32.0 |
| Lebanon | 239 | 239 | 0.0 | 0.0 | 18.2 | 8.0 | 3.0 | 6.0 | 7.0 | 11.0 | 17.0 | 23.0 | 31.0 | 38.0 | 60.0 |
| Netherlands | 119 | 110 | 5.8 | 1.3 | 17.4 | 11.0 | 2.0 | 8.0 | 10.0 | 13.0 | 18.0 | 23.0 | 25.0 | 27.0 | 30.0 |
| Norway | 129 | 128 | 0.4 | 0.0 | 17.2 | 7.0 | 2.0 | 7.0 | 8.0 | 12.0 | 18.0 | 22.0 | 25.0 | 26.0 | 31.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 22.0 | 26.0 | 10.0 | 14.0 | 16.0 | 19.0 | 22.0 | 26.0 | 27.0 | 28.0 | 30.0 |
| Slovenia | 66 | 63 | 0.0 | 7.2 | 23.2 | 17.0 | 1.0 | 11.0 | 14.0 | 18.0 | 24.0 | 28.0 | 33.0 | 35.0 | 42.0 |
| Sweden | 155 | 149 | 2.0 | 0.8 | 22.2 | 28.0 | 4.0 | 11.0 | 14.0 | 18.0 | 22.0 | 27.0 | 29.0 | 31.0 | 34.0 |
| International Avg. | 133 | 129 | 1.0 | 4.3 | 22.1 | 18.3 | 5.6 | 11.1 | 13.3 | 17.2 | 21.9 | 27.3 | 30.9 | 33.3 | 39.2 |

Question : How many minutes per week do you teach physics to the TIMSS class?
 Location : TQP3-17 (PT2PTIMT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 47 | 0.0 | 23.6 | 184.4 | 180.0 | 90.0 | 120.0 | 170.0 | 180.0 | 180.0 | 180.0 | 240.0 | 275.0 | 275.0 |
| Iran, Islamic Rep. of | 155 | 150 | 0.0 | 3.5 | 230.6 | 180.0 | 25.0 | 150.0 | 180.0 | 180.0 | 200.0 | 270.0 | 360.0 | 360.0 | 480.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 182.3 | 180.0 | 120.0 | 150.0 | 150.0 | 165.0 | 180.0 | 200.0 | 240.0 | 240.0 | 240.0 |
| Lebanon | 239 | 239 | 0.0 | 0.0 | 364.3 | 350.0 | 7.0 | 240.0 | 280.0 | 350.0 | 360.0 | 385.0 | 420.0 | 440.0 | 1595 |
| Netherlands | 119 | 112 | 5.8 | 0.0 | 172.9 | 200.0 | 45.0 | 90.0 | 100.0 | 150.0 | 180.0 | 200.0 | 250.0 | 250.0 | 300.0 |
| Norway | 129 | 128 | 0.4 | 0.0 | 231.2 | 225.0 | 5.0 | 200.0 | 200.0 | 225.0 | 225.0 | 225.0 | 230.0 | 300.0 | 650.0 |
| Russian Federation | 158 | 157 | 0.0 | 0.5 | 217.2 | 225.0 | 25.0 | 135.0 | 160.0 | 180.0 | 220.0 | 240.0 | 280.0 | 360.0 | 480.0 |
| Slovenia | 66 | 64 | 0.0 | 4.0 | 174.8 | 180.0 | 90.0 | 135.0 | 135.0 | 170.0 | 180.0 | 180.0 | 205.0 | 240.0 | 360.0 |
| Sweden | 155 | 147 | 2.0 | 3.8 | 194.9 | 180.0 | 90.0 | 120.0 | 135.0 | 160.0 | 180.0 | 225.0 | 265.0 | 290.0 | 400.0 |
| International Avg. | 133 | 129 | 0.9 | 4.1 | 217.0 | 211.1 | 55.2 | 148.9 | 167.8 | 195.6 | 211.7 | 233.9 | 276.7 | 306.1 | 531.1 |

Question : How many minutes per week do you usually spend preparing to teach the TIMSS class?
 Location : TQP3-18 (PT2PTIPM)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|-------|-------|------|------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 44 | 0.0 | 31.6 | 189.9 | 240.0 | 18.0 | 30.0 | 50.0 | 80.0 | 220.0 | 240.0 | 300.0 | 360.0 | 500.0 |
| Iran, Islamic Rep. of | 155 | 145 | 0.0 | 6.2 | 163.3 | 120.0 | 2.0 | 20.0 | 40.0 | 60.0 | 120.0 | 200.0 | 360.0 | 400.0 | 720.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 131.5 | 60.0 | 30.0 | 30.0 | 40.0 | 60.0 | 100.0 | 180.0 | 240.0 | 350.0 | 495.0 |
| Lebanon | 239 | 239 | 0.0 | 0.0 | 255.3 | 120.0 | 7.0 | 60.0 | 90.0 | 120.0 | 200.0 | 360.0 | 500.0 | 600.0 | 1000 |
| Netherlands | 119 | 112 | 5.8 | 0.0 | 66.1 | 100.0 | 10.0 | 15.0 | 20.0 | 30.0 | 50.0 | 90.0 | 120.0 | 180.0 | 350.0 |
| Norway | 129 | 124 | 2.0 | 1.3 | 185.6 | 200.0 | 40.0 | 60.0 | 75.0 | 120.0 | 150.0 | 240.0 | 300.0 | 400.0 | 480.0 |
| Russian Federation | 158 | 152 | 0.0 | 3.8 | 327.1 | 300.0 | 30.0 | 80.0 | 120.0 | 200.0 | 300.0 | 400.0 | 600.0 | 720.0 | 1200 |
| Slovenia | 66 | 63 | 0.0 | 4.1 | 127.1 | 60.0 | 10.0 | 30.0 | 30.0 | 60.0 | 90.0 | 150.0 | 240.0 | 360.0 | 540.0 |
| Sweden | 155 | 146 | 2.0 | 5.1 | 164.8 | 120.0 | 0.0 | 40.0 | 70.0 | 100.0 | 160.0 | 200.0 | 300.0 | 300.0 | 500.0 |
| International Avg. | 133 | 127 | 1.1 | 5.9 | 179.0 | 146.7 | 16.3 | 40.6 | 59.4 | 92.2 | 154.4 | 228.9 | 328.9 | 407.8 | 642.8 |

Question : Do you use a textbook as the basis for instruction in teaching physics to the TIMSS class?
 Location : TQP3-19A (PT2PTBTC)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 48 | 89.4 | 10.6 | 0.0 | 20.4 | 498.6 | 479.8 | . | 485.9 |
| Iran, Islamic Rep. of | 155 | 152 | 95.5 | 4.5 | 0.0 | 1.2 | 461.7 | 424.0 | . | 449.8 |
| Italy | 115 | 114 | 98.8 | 1.2 | 0.0 | 1.1 | 424.2 | 404.7 | . | 270.8 |
| Lebanon | 239 | 231 | 88.6 | 11.4 | 0.2 | 3.0 | 446.8 | 408.0 | 488.2 | 477.9 |
| Netherlands | 119 | 112 | 100.0 | . | 5.8 | 0.0 | 582.9 | . | 576.0 | . |
| Norway | 129 | 128 | 100.0 | . | 0.4 | 0.0 | 533.9 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 89.5 | 10.5 | 0.0 | 0.0 | 523.2 | 504.7 | . | . |
| Slovenia | 66 | 66 | 62.3 | 37.7 | 0.0 | 0.0 | 529.0 | 544.8 | . | . |
| Sweden | 155 | 149 | 99.7 | 0.3 | 2.0 | 0.6 | 497.6 | 394.8 | 478.5 | 507.3 |
| International Avg. | 133 | 129 | 91.5 | 10.9 | 0.9 | 2.9 | 499.8 | 451.5 | 534.7 | 438.3 |

Question : Does each student have his or her own textbook?
Location : TQP3-19B (PT2POTXB)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 48 | 94.8 | 5.2 | 0.0 | 19.2 | 496.9 | 528.5 | . | 477.3 |
| Iran, Islamic Rep. of | 155 | 154 | 99.5 | 0.5 | 0.0 | 0.2 | 460.2 | 435.8 | . | 366.8 |
| Italy | 115 | 114 | 97.2 | 2.8 | 0.0 | 1.1 | 426.2 | 344.8 | . | 270.8 |
| Lebanon | 239 | 233 | 84.0 | 16.0 | 0.9 | 1.9 | 451.2 | 405.7 | 419.4 | 431.7 |
| Netherlands | 119 | 112 | 100.0 | . | 5.8 | 0.0 | 582.9 | . | 576.0 | . |
| Norway | 129 | 128 | 100.0 | . | 0.4 | 0.0 | 533.9 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 96.4 | 3.6 | 0.0 | 0.0 | 520.8 | 533.8 | . | . |
| Slovenia | 66 | 66 | 75.8 | 24.2 | 0.0 | 0.0 | 533.2 | 540.6 | . | . |
| Sweden | 155 | 149 | 99.6 | 0.4 | 2.0 | 0.6 | 497.5 | 428.8 | 478.5 | 507.3 |
| International Avg. | 133 | 129 | 94.1 | 7.5 | 1.0 | 2.6 | 500.3 | 459.7 | 517.5 | 410.8 |

Question : How often do you require students to do problems or exercises from their textbooks?
Location : TQP3-19CA (PT2PRDPE)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 48 | 68.8 | 9.4 | 21.8 | . | 0.0 | 19.2 | 511.0 | 475.6 | 469.2 | . | . | 477.3 |
| Iran, Islamic Rep. of | 155 | 155 | 85.3 | 10.5 | 4.3 | . | 0.0 | 0.0 | 464.9 | 450.2 | 382.7 | . | . | . |
| Italy | 115 | 114 | 59.5 | 22.5 | 18.0 | . | 0.0 | 1.1 | 440.2 | 417.7 | 378.0 | . | . | 270.8 |
| Lebanon | 239 | 232 | 76.0 | 12.9 | 7.1 | 3.9 | 0.0 | 2.5 | 446.6 | 437.7 | 442.4 | 394.8 | . | 459.9 |
| Netherlands | 119 | 112 | 74.3 | 14.9 | 8.3 | 2.5 | 5.8 | 0.0 | 581.7 | 584.0 | 582.2 | 614.5 | 576.0 | . |
| Norway | 129 | 128 | 84.5 | 10.8 | 4.8 | . | 0.4 | 0.0 | 535.7 | 508.9 | 558.1 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 55.0 | 28.3 | 15.5 | 1.2 | 0.0 | 0.0 | 511.4 | 521.2 | 566.0 | 399.6 | . | . |
| Slovenia | 66 | 66 | 26.8 | 19.6 | 48.1 | 5.4 | 0.0 | 0.0 | 551.2 | 541.5 | 519.0 | 571.6 | . | . |
| Sweden | 155 | 150 | 54.3 | 29.5 | 15.9 | 0.3 | 2.0 | 0.0 | 498.3 | 494.8 | 499.7 | 451.1 | 478.5 | 474.7 |
| International Avg. | 133 | 129 | 64.9 | 17.6 | 16.0 | 2.7 | 0.9 | 2.5 | 504.5 | 492.4 | 488.6 | 486.3 | 550.2 | 420.6 |

Question : How often do you require students to read the textbook examples of how to do problems or exercises?
 Location : TQP3-19CB (PT2PRDRT)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 48 | 48.8 | 21.7 | 29.5 | . | 0.0 | 19.2 | 478.8 | 555.9 | 488.9 | . | . | 477.3 |
| Iran, Islamic Rep. of | 155 | 155 | 76.7 | 13.6 | 9.1 | 0.6 | 0.0 | 0.0 | 459.5 | 453.2 | 475.1 | 426.8 | . | . |
| Italy | 115 | 114 | 38.2 | 21.7 | 38.9 | 1.3 | 0.0 | 1.1 | 415.5 | 462.5 | 411.2 | 405.4 | . | 270.8 |
| Lebanon | 239 | 232 | 50.7 | 19.2 | 23.6 | 6.5 | 0.0 | 3.5 | 437.9 | 441.7 | 460.0 | 414.6 | . | 476.4 |
| Netherlands | 119 | 112 | 25.9 | 26.5 | 30.4 | 17.3 | 5.8 | 0.0 | 582.4 | 583.9 | 579.3 | 588.4 | 576.0 | . |
| Norway | 129 | 128 | 28.4 | 25.5 | 36.8 | 9.2 | 0.4 | 0.0 | 530.2 | 529.9 | 535.8 | 548.3 | 595.9 | . |
| Russian Federation | 158 | 158 | 25.6 | 25.6 | 41.9 | 6.9 | 0.0 | 0.0 | 529.3 | 524.9 | 504.1 | 582.5 | . | . |
| Slovenia | 66 | 65 | 7.1 | 9.6 | 61.1 | 22.1 | 0.0 | 1.4 | 577.3 | 516.9 | 532.3 | 540.3 | . | 474.8 |
| Sweden | 155 | 149 | 17.1 | 13.4 | 54.8 | 14.7 | 2.0 | 1.6 | 488.8 | 496.9 | 500.5 | 496.7 | 478.5 | 489.2 |
| International Avg. | 133 | 129 | 35.4 | 19.7 | 36.2 | 9.8 | 0.9 | 3.0 | 500.0 | 507.3 | 498.6 | 500.4 | 550.2 | 437.7 |

Question : How often do you require students to read about physics theory from their textbooks?
 Location : TQP3-19CC (PT2PRDMT)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 47 | 41.5 | 6.1 | 37.8 | 14.6 | 0.0 | 20.9 | 490.2 | 529.5 | 508.4 | 486.3 | . | 477.5 |
| Iran, Islamic Rep. of | 155 | 155 | 68.0 | 14.5 | 13.9 | 3.7 | 0.0 | 0.0 | 459.6 | 465.8 | 457.4 | 451.2 | . | . |
| Italy | 115 | 114 | 51.6 | 17.3 | 24.6 | 6.5 | 0.0 | 1.1 | 424.6 | 419.5 | 423.9 | 430.4 | . | 270.8 |
| Lebanon | 239 | 231 | 63.4 | 9.8 | 20.3 | 6.6 | 0.0 | 3.9 | 441.5 | 448.5 | 447.1 | 420.7 | . | 481.4 |
| Netherlands | 119 | 112 | 35.7 | 26.2 | 18.1 | 20.0 | 5.8 | 0.0 | 586.1 | 579.8 | 579.9 | 583.9 | 576.0 | . |
| Norway | 129 | 127 | 28.0 | 18.7 | 45.0 | 8.3 | 0.4 | 0.8 | 537.4 | 514.6 | 535.6 | 554.4 | 595.9 | 550.4 |
| Russian Federation | 158 | 157 | 45.3 | 11.0 | 36.8 | 6.9 | 0.0 | 0.2 | 518.2 | 549.6 | 516.4 | 525.9 | . | 394.1 |
| Slovenia | 66 | 66 | 14.1 | 14.5 | 44.2 | 27.2 | 0.0 | 0.0 | 534.1 | 506.7 | 539.8 | 542.7 | . | . |
| Sweden | 155 | 150 | 21.1 | 20.4 | 48.4 | 10.1 | 2.0 | 0.0 | 495.2 | 497.8 | 497.7 | 499.2 | 478.5 | 474.7 |
| International Avg. | 133 | 129 | 40.9 | 15.4 | 32.1 | 11.5 | 0.9 | 3.0 | 498.5 | 501.3 | 500.7 | 499.4 | 550.2 | 441.5 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on teaching new material to the whole class?
 Location : TQP3-20A (PT2PPTNM)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|------|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 29.3 | 30.0 | 10.0 | 10.0 | 15.0 | 20.0 | 30.0 | 35.0 | 50.0 | 50.0 | 50.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 39.7 | 50.0 | 0.0 | 3.0 | 10.0 | 30.0 | 40.0 | 50.0 | 65.0 | 70.0 | 80.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 30.5 | 30.0 | 1.0 | 10.0 | 20.0 | 20.0 | 30.0 | 40.0 | 45.0 | 50.0 | 60.0 |
| Lebanon | 239 | 216 | 0.0 | 9.5 | 27.0 | 30.0 | 0.0 | 7.0 | 10.0 | 16.0 | 25.0 | 35.0 | 50.0 | 54.0 | 74.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 33.1 | 20.0 | 10.0 | 10.0 | 15.0 | 20.0 | 30.0 | 40.0 | 60.0 | 60.0 | 80.0 |
| Norway | 129 | 126 | 0.4 | 2.1 | 30.7 | 30.0 | 10.0 | 10.0 | 15.0 | 20.0 | 30.0 | 40.0 | 50.0 | 50.0 | 65.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 31.5 | 30.0 | 0.0 | 15.0 | 20.0 | 25.0 | 30.0 | 40.0 | 50.0 | 50.0 | 75.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 45.7 | 60.0 | 15.0 | 20.0 | 20.0 | 30.0 | 50.0 | 60.0 | 70.0 | 80.0 | 80.0 |
| Sweden | 155 | 147 | 2.0 | 3.4 | 36.3 | 30.0 | 0.0 | 15.0 | 20.0 | 25.0 | 30.0 | 50.0 | 60.0 | 65.0 | 80.0 |
| International Avg. | 133 | 126 | 0.9 | 5.3 | 33.8 | 34.4 | 5.1 | 11.1 | 16.1 | 22.9 | 32.8 | 43.3 | 55.6 | 58.8 | 71.6 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on working problems on their own
 or with other students?

Location : TQP3-20B (PT2PPTWP)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 18.6 | 20.0 | 5.0 | 10.0 | 10.0 | 10.0 | 20.0 | 20.0 | 30.0 | 40.0 | 40.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 17.1 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 30.0 | 35.0 | 50.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 12.0 | 10.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 15.0 | 21.0 | 30.0 | 50.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 18.8 | 10.0 | 0.0 | 5.0 | 9.0 | 10.0 | 18.0 | 25.0 | 33.0 | 40.0 | 57.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 27.8 | 20.0 | 0.0 | 10.0 | 10.0 | 20.0 | 25.0 | 35.0 | 50.0 | 55.0 | 70.0 |
| Norway | 129 | 126 | 0.4 | 2.1 | 33.5 | 30.0 | 5.0 | 15.0 | 20.0 | 25.0 | 30.0 | 40.0 | 50.0 | 50.0 | 60.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 23.8 | 20.0 | 0.0 | 6.0 | 10.0 | 17.0 | 25.0 | 30.0 | 40.0 | 40.0 | 70.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 16.7 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 15.0 | 22.0 | 30.0 | 35.0 | 50.0 |
| Sweden | 155 | 146 | 2.0 | 4.5 | 25.0 | 20.0 | 0.0 | 5.0 | 10.0 | 20.0 | 25.0 | 30.0 | 40.0 | 45.0 | 60.0 |
| International Avg. | 133 | 126 | 0.9 | 5.4 | 21.5 | 16.7 | 1.1 | 6.8 | 9.3 | 14.1 | 20.3 | 26.3 | 36.0 | 41.1 | 56.3 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on reviewing and summarizing what has been taught for the whole class?

Location : TQP3-20C (PT2PPTRS)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 10.7 | 10.0 | 0.0 | 5.0 | 8.0 | 10.0 | 10.0 | 10.0 | 15.0 | 20.0 | 25.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 8.3 | 5.0 | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 50.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 9.8 | 10.0 | 0.0 | 5.0 | 5.0 | 5.0 | 10.0 | 10.0 | 15.0 | 20.0 | 20.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 11.2 | 10.0 | 0.0 | 5.0 | 5.0 | 8.0 | 10.0 | 15.0 | 20.0 | 20.0 | 40.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 8.6 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 10.0 | 20.0 | 20.0 | 25.0 |
| Norway | 129 | 125 | 0.4 | 3.1 | 8.0 | 5.0 | 0.0 | 4.0 | 5.0 | 5.0 | 9.0 | 10.0 | 10.0 | 15.0 | 20.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 10.5 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 15.0 | 15.0 | 20.0 | 28.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 6.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 30.0 | 30.0 |
| Sweden | 155 | 146 | 2.0 | 4.0 | 10.9 | 10.0 | 0.0 | 0.0 | 5.0 | 6.0 | 10.0 | 10.0 | 20.0 | 25.0 | 30.0 |
| International Avg. | 133 | 126 | 0.9 | 5.4 | 9.3 | 7.8 | 0.0 | 3.2 | 4.2 | 6.0 | 8.8 | 11.1 | 16.1 | 21.1 | 29.8 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on reviewing homework?
 Location : TQP3-20D (PT2PPTRH)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|-----|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 8.3 | 5.0 | 1.0 | 5.0 | 5.0 | 5.0 | 10.0 | 10.0 | 13.0 | 15.0 | 15.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 8.2 | 5.0 | 0.0 | 0.0 | 1.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 40.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 10.4 | 10.0 | 0.0 | 0.0 | 3.0 | 5.0 | 10.0 | 15.0 | 20.0 | 20.0 | 35.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 9.6 | 10.0 | 0.0 | 1.0 | 3.0 | 5.0 | 10.0 | 11.0 | 20.0 | 20.0 | 38.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 12.8 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 20.0 | 30.0 | 30.0 | 50.0 |
| Norway | 129 | 123 | 0.4 | 3.9 | 8.4 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 8.0 | 10.0 | 20.0 | 20.0 | 25.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 8.0 | 5.0 | 0.0 | 3.0 | 3.0 | 5.0 | 8.0 | 10.0 | 11.0 | 15.0 | 30.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 5.4 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 7.0 | 10.0 | 20.0 | 20.0 |
| Sweden | 155 | 145 | 2.0 | 3.8 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 10.0 | 10.0 | 25.0 |
| International Avg. | 133 | 126 | 0.9 | 5.5 | 8.4 | 6.7 | 0.1 | 1.0 | 1.7 | 3.9 | 7.9 | 11.4 | 16.6 | 18.9 | 30.9 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on re-teaching and clarifying content/procedures for the whole class?
 Location : TQP3-20E (PT2PPTRT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 11.9 | 10.0 | 5.0 | 5.0 | 5.0 | 10.0 | 10.0 | 11.0 | 20.0 | 20.0 | 40.0 |
| Iran, Islamic Rep. of | 155 | 151 | 0.0 | 2.4 | 7.1 | 5.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 11.0 | 20.0 | 30.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 10.2 | 10.0 | 0.0 | 5.0 | 5.0 | 5.0 | 10.0 | 10.0 | 20.0 | 20.0 | 30.0 |
| Lebanon | 239 | 216 | 0.0 | 9.5 | 10.3 | 10.0 | 0.0 | 3.0 | 5.0 | 5.0 | 10.0 | 10.0 | 20.0 | 20.0 | 40.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 8.3 | 10.0 | 0.0 | 0.0 | 1.0 | 5.0 | 5.0 | 10.0 | 20.0 | 20.0 | 50.0 |
| Norway | 129 | 124 | 0.4 | 4.1 | 6.3 | 5.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 20.0 | 20.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 8.6 | 10.0 | 0.0 | 2.0 | 4.0 | 5.0 | 10.0 | 10.0 | 15.0 | 20.0 | 35.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 8.0 | 5.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 20.0 | 30.0 | 40.0 |
| Sweden | 155 | 146 | 2.0 | 3.5 | 8.5 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 10.0 | 15.0 | 15.0 | 25.0 |
| International Avg. | 133 | 126 | 0.9 | 5.6 | 8.8 | 8.3 | 0.6 | 1.7 | 2.2 | 5.6 | 7.8 | 10.1 | 16.8 | 20.6 | 34.4 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on oral or written tests or quizzes?
 Location : TQP3-20F (PT2PPTTQ)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 13.0 | 10.0 | 2.0 | 4.0 | 5.0 | 5.0 | 10.0 | 20.0 | 25.0 | 30.0 | 40.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 10.8 | 5.0 | 0.0 | 2.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 45.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 19.7 | 20.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 30.0 | 50.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 12.1 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 15.0 | 20.0 | 30.0 | 35.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 1.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 |
| Norway | 129 | 126 | 0.4 | 2.1 | 7.9 | 10.0 | 0.0 | 2.0 | 4.0 | 5.0 | 10.0 | 10.0 | 10.0 | 15.0 | 30.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 13.3 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 17.0 | 20.0 | 28.0 | 40.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 10.6 | 10.0 | 0.0 | 3.0 | 5.0 | 6.0 | 10.0 | 15.0 | 20.0 | 20.0 | 30.0 |
| Sweden | 155 | 146 | 2.0 | 3.9 | 5.9 | 5.0 | 0.0 | 0.0 | 0.0 | 3.0 | 5.0 | 10.0 | 10.0 | 15.0 | 20.0 |
| International Avg. | 133 | 126 | 0.9 | 5.3 | 10.6 | 8.9 | 0.2 | 2.9 | 4.3 | 6.6 | 9.4 | 14.7 | 17.8 | 22.6 | 33.3 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on classroom management tasks not related to the lesson's content/purpose?

Location : TQP3-20G (PT2PPTCM)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|-----|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 5.0 | 5.0 | 0.0 | 0.0 | 1.0 | 3.0 | 5.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Iran, Islamic Rep. of | 155 | 151 | 0.0 | 2.4 | 4.7 | 5.0 | 0.0 | 0.0 | 0.0 | 1.0 | 5.0 | 5.0 | 10.0 | 15.0 | 30.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 3.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 10.0 | 10.0 | 20.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 5.6 | 5.0 | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 10.0 | 10.0 | 15.0 | 24.0 |
| Netherlands | 119 | 111 | 5.8 | 1.1 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 20.0 |
| Norway | 129 | 126 | 0.4 | 2.1 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 5.0 | 10.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.0 | 5.0 | 10.0 | 10.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 3.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Sweden | 155 | 145 | 2.0 | 4.4 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 10.0 | 20.0 |
| International Avg. | 133 | 126 | 0.9 | 5.4 | 3.5 | 1.7 | 0.0 | 0.0 | 0.1 | 0.7 | 2.7 | 5.0 | 8.9 | 10.6 | 17.1 |

Question : In a typical week of physics lessons for the TIMSS class, what percentage of time do students spend on classroom management tasks not related to the lesson's content/purpose?

Location : TQP3-20H (PT2PPTOA)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|-----|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 21.9 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 5.0 | 10.0 | 10.0 | 13.0 |
| Iran, Islamic Rep. of | 155 | 152 | 0.0 | 1.9 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 10.0 | 30.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 3.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 40.0 |
| Lebanon | 239 | 217 | 0.0 | 9.2 | 4.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 8.0 | 10.0 | 16.0 | 30.0 |
| Netherlands | 119 | 110 | 5.8 | 2.9 | 5.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 19.0 | 30.0 |
| Norway | 129 | 126 | 0.4 | 2.1 | 4.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 10.0 | 13.0 | 15.0 | 20.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.0 | 8.0 | 10.0 | 34.0 |
| Slovenia | 66 | 62 | 0.0 | 6.7 | 4.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 5.0 | 10.0 | 20.0 | 25.0 |
| Sweden | 155 | 146 | 2.0 | 4.2 | 5.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 20.0 | 25.0 | 65.0 |
| International Avg. | 133 | 126 | 0.9 | 5.6 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.7 | 6.3 | 11.8 | 15.6 | 31.9 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to watch you demonstrate an experiment or investigation?
 Location : TQP3-21A (PT2PTPWE)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 15.1 | 11.0 | 67.0 | 6.9 | 0.0 | 19.7 | 515.4 | 540.9 | 479.8 | 551.3 | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 154 | 41.4 | 17.7 | 23.4 | 17.6 | 0.0 | 0.3 | 446.8 | 460.4 | 488.1 | 453.7 | . | 405.4 |
| Italy | 115 | 114 | 3.1 | 8.0 | 78.1 | 10.8 | 0.0 | 1.1 | 445.9 | 418.9 | 421.0 | 442.2 | . | 270.8 |
| Lebanon | 239 | 226 | 26.2 | 17.2 | 53.3 | 3.3 | 0.0 | 5.0 | 439.7 | 450.0 | 442.8 | 441.7 | . | 449.3 |
| Netherlands | 119 | 112 | 1.5 | 26.6 | 70.1 | 1.8 | 5.8 | 0.0 | 609.5 | 576.0 | 584.2 | 611.8 | 576.0 | . |
| Norway | 129 | 126 | 2.6 | 21.3 | 68.3 | 7.7 | 0.4 | 1.3 | 514.9 | 533.2 | 532.0 | 555.3 | 595.9 | 553.3 |
| Russian Federation | 158 | 157 | 7.7 | 40.7 | 51.5 | . | 0.0 | 0.4 | 441.3 | 508.9 | 542.4 | . | . | 590.4 |
| Slovenia | 66 | 66 | 9.7 | 40.1 | 50.2 | . | 0.0 | 0.0 | 564.3 | 527.6 | 535.1 | . | . | . |
| Sweden | 155 | 148 | 28.4 | 43.5 | 27.0 | 1.2 | 2.0 | 2.9 | 486.9 | 503.2 | 497.8 | 567.2 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 15.1 | 25.1 | 54.3 | 7.1 | 0.9 | 3.4 | 496.1 | 502.1 | 502.6 | 517.6 | 550.2 | 461.7 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to conduct experiments or investigations?
 Location : TQP3-21B (PT2PTPCE)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 13.2 | 2.3 | 73.8 | 10.7 | 0.0 | 19.7 | 526.8 | 422.9 | 493.6 | 497.9 | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 154 | 12.9 | 13.5 | 55.4 | 18.2 | 0.0 | 0.6 | 458.8 | 453.1 | 472.5 | 429.8 | . | 387.0 |
| Italy | 115 | 114 | 0.6 | 9.0 | 72.2 | 18.2 | 0.0 | 1.1 | 307.4 | 421.6 | 429.1 | 408.3 | . | 270.8 |
| Lebanon | 239 | 225 | 13.5 | 16.3 | 58.0 | 12.2 | 0.0 | 4.7 | 445.5 | 464.0 | 438.8 | 437.5 | . | 440.7 |
| Netherlands | 119 | 112 | . | 2.3 | 84.3 | 13.3 | 5.8 | 0.0 | . | 586.6 | 581.5 | 590.9 | 576.0 | . |
| Norway | 129 | 126 | 1.2 | 4.4 | 84.5 | 9.9 | 0.4 | 1.3 | 524.0 | 544.1 | 532.0 | 543.9 | 595.9 | 553.3 |
| Russian Federation | 158 | 157 | 1.9 | 17.1 | 79.6 | 1.4 | 0.0 | 0.4 | 601.6 | 509.4 | 519.6 | 626.2 | . | 590.4 |
| Slovenia | 66 | 66 | 1.6 | 13.2 | 83.0 | 2.2 | 0.0 | 0.0 | 582.5 | 511.2 | 538.7 | 499.9 | . | . |
| Sweden | 155 | 148 | 5.6 | 23.4 | 69.2 | 1.8 | 2.0 | 2.9 | 456.5 | 493.4 | 503.6 | 463.7 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 6.3 | 11.3 | 73.3 | 9.8 | 0.9 | 3.4 | 487.9 | 489.6 | 501.0 | 499.8 | 550.2 | 457.9 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them use laws and formulas of physics to solve routine problems?
 Location : TQP3-21C (PT2PTPSP)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 90.5 | 4.6 | 5.0 | . | 0.0 | 19.7 | 495.7 | 507.9 | 506.5 | . | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 155 | 54.6 | 30.1 | 15.3 | . | 0.0 | 0.0 | 461.6 | 461.7 | 450.1 | . | . | . |
| Italy | 115 | 114 | 47.3 | 35.1 | 17.7 | . | 0.0 | 1.1 | 414.9 | 441.0 | 414.2 | . | . | 270.8 |
| Lebanon | 239 | 228 | 74.3 | 14.7 | 10.2 | 0.8 | 0.0 | 3.9 | 444.1 | 446.6 | 432.8 | 494.8 | . | 438.4 |
| Netherlands | 119 | 112 | 43.5 | 46.2 | 10.2 | . | 5.8 | 0.0 | 578.7 | 586.8 | 583.2 | . | 576.0 | . |
| Norway | 129 | 126 | 40.6 | 41.8 | 17.6 | . | 0.4 | 1.3 | 539.1 | 529.1 | 531.6 | . | 595.9 | 553.3 |
| Russian Federation | 158 | 157 | 82.5 | 17.2 | 0.3 | . | 0.0 | 0.4 | 516.3 | 544.8 | 449.2 | . | . | 590.4 |
| Slovenia | 66 | 66 | 39.2 | 37.4 | 20.5 | 2.9 | 0.0 | 0.0 | 537.9 | 529.0 | 541.0 | 529.6 | . | . |
| Sweden | 155 | 148 | 27.1 | 24.8 | 45.5 | 2.6 | 2.0 | 2.9 | 489.2 | 491.4 | 507.3 | 484.3 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 55.5 | 28.0 | 15.8 | 2.1 | 0.9 | 3.3 | 497.5 | 504.2 | 490.6 | 502.9 | 550.2 | 469.3 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to give explanations about something they are studying?
 Location : TQP3-21D (PT2PTPGE)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 86.6 | 10.6 | 2.8 | . | 0.0 | 19.7 | 496.2 | 493.9 | 526.8 | . | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 155 | 50.9 | 22.3 | 25.3 | 1.5 | 0.0 | 0.0 | 461.8 | 454.8 | 462.8 | 419.1 | . | . |
| Italy | 115 | 114 | 68.2 | 22.0 | 9.8 | . | 0.0 | 1.1 | 420.4 | 433.5 | 427.0 | . | . | 270.8 |
| Lebanon | 239 | 226 | 60.4 | 21.9 | 16.9 | 0.8 | 0.0 | 5.2 | 438.3 | 446.2 | 452.0 | 494.8 | . | 456.3 |
| Netherlands | 119 | 112 | 8.2 | 22.6 | 49.7 | 19.5 | 5.8 | 0.0 | 589.9 | 578.3 | 584.3 | 581.8 | 576.0 | . |
| Norway | 129 | 123 | 25.7 | 30.2 | 44.2 | . | 0.4 | 4.7 | 539.8 | 518.8 | 536.8 | . | 595.9 | 569.6 |
| Russian Federation | 158 | 157 | 65.5 | 25.2 | 9.4 | . | 0.0 | 0.4 | 529.6 | 517.7 | 469.0 | . | . | 590.4 |
| Slovenia | 66 | 66 | 11.8 | 7.8 | 62.9 | 17.5 | 0.0 | 0.0 | 568.4 | 528.8 | 530.2 | 532.3 | . | . |
| Sweden | 155 | 147 | 36.8 | 29.5 | 33.2 | 0.5 | 2.0 | 3.7 | 488.9 | 504.8 | 501.6 | 500.9 | 478.5 | 483.2 |
| International Avg. | 133 | 128 | 46.0 | 21.3 | 28.2 | 8.0 | 0.9 | 3.9 | 503.7 | 497.4 | 498.9 | 505.8 | 550.2 | 475.9 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to relate what they are learning in physics
 to their daily lives?

Location : TQP3-21E (PT2PTPDL)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|------------------------------|--------------|--|---|---------------------------|-----------------|---------------------------------|-----------------|
| Armenia | 58 | 49 | 70.0 | 13.1 | 16.9 | . | 0.0 | 19.7 | 504.2 | 482.4 | 477.3 | . | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 153 | 36.4 | 36.7 | 27.0 | . | 0.0 | 1.4 | 441.9 | 454.7 | 490.1 | . | . | 478.7 |
| Italy | 115 | 114 | 17.3 | 28.7 | 53.5 | 0.4 | 0.0 | 1.1 | 419.1 | 422.4 | 425.6 | 507.8 | . | 270.8 |
| Lebanon | 239 | 228 | 59.6 | 21.2 | 18.4 | 0.8 | 0.0 | 3.9 | 445.9 | 442.5 | 435.9 | 494.8 | . | 438.4 |
| Netherlands | 119 | 112 | 5.8 | 26.9 | 64.0 | 3.2 | 5.8 | 0.0 | 591.5 | 576.1 | 584.8 | 585.3 | 576.0 | . |
| Norway | 129 | 125 | 15.3 | 29.8 | 53.2 | 1.7 | 0.4 | 2.2 | 535.8 | 525.0 | 536.8 | 549.4 | 595.9 | 555.0 |
| Russian Federation | 158 | 157 | 31.3 | 43.4 | 25.0 | 0.3 | 0.0 | 0.4 | 555.5 | 495.6 | 522.0 | 499.5 | . | 590.4 |
| Slovenia | 66 | 66 | 24.4 | 35.3 | 40.3 | . | 0.0 | 0.0 | 549.7 | 533.8 | 527.1 | . | . | . |
| Sweden | 155 | 147 | 19.2 | 19.3 | 59.9 | 1.6 | 2.0 | 3.4 | 481.6 | 496.6 | 504.6 | 452.0 | 478.5 | 483.1 |
| International Avg. | 133 | 128 | 31.0 | 28.3 | 39.8 | 1.3 | 0.9 | 3.6 | 502.8 | 492.1 | 500.5 | 514.8 | 550.2 | 471.6 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to memorize formulas and procedures?
 Location : TQP3-21F (PT2PTPMF)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 44.3 | 17.7 | 38.1 | . | 0.0 | 19.7 | 524.0 | 469.8 | 477.6 | . | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 155 | 29.8 | 29.2 | 31.4 | 9.6 | 0.0 | 0.0 | 445.9 | 447.8 | 478.0 | 480.6 | . | . |
| Italy | 115 | 114 | 4.5 | 10.3 | 34.8 | 50.4 | 0.0 | 1.1 | 375.5 | 466.7 | 420.1 | 422.1 | . | 270.8 |
| Lebanon | 239 | 223 | 39.2 | 22.1 | 35.2 | 3.6 | 0.0 | 6.5 | 441.9 | 423.4 | 456.7 | 458.2 | . | 442.5 |
| Netherlands | 119 | 112 | 3.8 | 10.2 | 34.1 | 51.9 | 5.8 | 0.0 | 536.5 | 584.4 | 588.4 | 582.4 | 576.0 | . |
| Norway | 129 | 126 | 5.4 | 13.3 | 48.2 | 33.1 | 0.4 | 1.3 | 527.9 | 540.1 | 530.7 | 536.1 | 595.9 | 553.3 |
| Russian Federation | 158 | 157 | 31.3 | 21.4 | 37.0 | 10.3 | 0.0 | 0.4 | 521.7 | 510.9 | 511.6 | 572.9 | . | 590.4 |
| Slovenia | 66 | 66 | 1.6 | 3.0 | 29.8 | 65.6 | 0.0 | 0.0 | 582.5 | 504.4 | 544.8 | 530.7 | . | . |
| Sweden | 155 | 148 | . | 4.2 | 37.4 | 58.4 | 2.0 | 2.9 | . | 494.3 | 500.8 | 496.3 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 20.0 | 14.6 | 36.2 | 35.4 | 0.9 | 3.6 | 494.5 | 493.5 | 501.0 | 509.9 | 550.2 | 470.0 |

Question : In teaching physics to the students in the TIMSS class, how often do you usually ask them to read textbooks or other resource materials?
 Location : TQP3-21G (PT2PTPRT)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 45.9 | 12.8 | 41.3 | . | 0.0 | 19.7 | 522.6 | 480.8 | 473.0 | . | . | 484.9 |
| Iran, Islamic Rep. of | 155 | 155 | 74.4 | 14.2 | 9.6 | 1.8 | 0.0 | 0.0 | 473.6 | 429.7 | 406.9 | 412.4 | . | . |
| Italy | 115 | 114 | 34.0 | 21.3 | 37.2 | 7.5 | 0.0 | 1.1 | 435.5 | 407.8 | 419.0 | 441.4 | . | 270.8 |
| Lebanon | 239 | 226 | 41.8 | 21.3 | 29.6 | 7.3 | 0.0 | 5.2 | 449.4 | 443.3 | 435.3 | 433.8 | . | 456.3 |
| Netherlands | 119 | 112 | 20.5 | 20.1 | 44.7 | 14.8 | 5.8 | 0.0 | 577.1 | 587.2 | 583.0 | 585.0 | 576.0 | . |
| Norway | 129 | 125 | 8.8 | 21.1 | 57.6 | 12.4 | 0.4 | 1.8 | 527.6 | 536.2 | 528.9 | 555.4 | 595.9 | 546.7 |
| Russian Federation | 158 | 156 | 13.5 | 12.2 | 62.3 | 12.1 | 0.1 | 0.4 | 500.0 | 462.2 | 522.2 | 596.3 | 576.8 | 590.4 |
| Slovenia | 66 | 66 | 3.4 | 6.4 | 65.1 | 25.2 | 0.0 | 0.0 | 510.0 | 552.6 | 534.0 | 536.2 | . | . |
| Sweden | 155 | 147 | 8.2 | 8.0 | 61.8 | 22.0 | 2.0 | 4.4 | 511.5 | 481.0 | 498.0 | 499.3 | 478.5 | 482.0 |
| International Avg. | 133 | 128 | 27.8 | 15.2 | 45.5 | 12.9 | 0.9 | 3.6 | 500.8 | 486.7 | 488.9 | 507.5 | 556.8 | 471.9 |

Question : To what extent do students with different academic abilities limit how you teach the TIMSS class?
 Location : TQP3-22A (PT2GLI01)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT AT ALL Mean | 2.A LITTLE Mean | 3.SOME Mean | 4.A LOT Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|-------------------------|-----------------------|----------------|--------------------|----------------------------------|-----------------|
| Armenia | 58 | 47 | 11.8 | 35.2 | 31.8 | 21.3 | 0.0 | 24.1 | 471.3 | 524.3 | 479.9 | 494.8 | . | 484.2 |
| Iran, Islamic Rep. of | 155 | 152 | 3.5 | 22.1 | 48.6 | 25.8 | 0.0 | 2.2 | 397.4 | 498.6 | 466.2 | 429.1 | . | 391.2 |
| Italy | 115 | 114 | 3.1 | 18.1 | 59.5 | 19.3 | 0.0 | 1.1 | 451.0 | 453.5 | 416.3 | 415.4 | . | 270.8 |
| Lebanon | 239 | 229 | 4.1 | 43.1 | 33.0 | 19.9 | 0.0 | 4.9 | 447.0 | 448.8 | 433.9 | 444.3 | . | 455.3 |
| Netherlands | 119 | 112 | 10.1 | 51.3 | 36.4 | 2.2 | 5.8 | 0.0 | 601.6 | 584.2 | 576.1 | 578.5 | 576.0 | . |
| Norway | 129 | 128 | 4.6 | 36.5 | 54.2 | 4.6 | 0.4 | 0.0 | 557.9 | 540.9 | 527.8 | 525.4 | 595.9 | . |
| Russian Federation | 158 | 158 | 2.5 | 12.4 | 40.5 | 44.6 | 0.0 | 0.0 | 475.8 | 510.7 | 532.3 | 516.7 | . | . |
| Slovenia | 66 | 66 | 2.8 | 32.4 | 48.0 | 16.7 | 0.0 | 0.0 | 539.0 | 541.9 | 532.8 | 526.9 | . | . |
| Sweden | 155 | 148 | 5.5 | 22.5 | 49.0 | 23.0 | 2.0 | 2.9 | 532.1 | 513.6 | 505.8 | 457.4 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 5.3 | 30.4 | 44.5 | 19.7 | 0.9 | 3.9 | 497.0 | 513.0 | 496.8 | 487.6 | 550.2 | 415.9 |

Question : To what extent do students who come from a wide range of backgrounds limit how you teach the TIMSS class?
 Location : TQP3-22B (PT2GLI02)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT AT ALL Mean | 2.A LITTLE Mean | 3.SOME Mean | 4.A LOT Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|-------------------------|-----------------------|----------------|--------------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 29.6 | 22.0 | 43.8 | 4.5 | 0.0 | 21.0 | 479.5 | 479.0 | 522.6 | 432.2 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 153 | 24.6 | 38.4 | 27.1 | 9.9 | 0.0 | 0.8 | 465.2 | 490.7 | 429.6 | 411.6 | . | 433.5 |
| Italy | 115 | 114 | 25.3 | 55.6 | 16.2 | 2.9 | 0.0 | 1.1 | 460.9 | 412.3 | 414.9 | 374.2 | . | 270.8 |
| Lebanon | 239 | 229 | 25.8 | 39.8 | 25.2 | 9.2 | 0.0 | 4.9 | 451.6 | 448.3 | 430.3 | 429.7 | . | 455.3 |
| Netherlands | 119 | 112 | 47.6 | 48.1 | 4.0 | 0.3 | 5.8 | 0.0 | 585.9 | 579.3 | 595.0 | 523.3 | 576.0 | . |
| Norway | 129 | 128 | 42.5 | 45.6 | 10.6 | 1.2 | 0.4 | 0.0 | 529.1 | 539.2 | 522.3 | 601.2 | 595.9 | . |
| Russian Federation | 158 | 158 | 41.0 | 34.7 | 21.3 | 3.0 | 0.0 | 0.0 | 538.6 | 526.7 | 490.5 | 438.1 | . | . |
| Slovenia | 66 | 66 | 67.3 | 20.6 | 10.5 | 1.6 | 0.0 | 0.0 | 542.9 | 521.6 | 503.0 | 582.5 | . | . |
| Sweden | 155 | 148 | 39.1 | 43.4 | 14.9 | 2.6 | 2.0 | 2.9 | 512.1 | 492.5 | 490.3 | 417.9 | 478.5 | 478.1 |
| International Avg. | 133 | 129 | 38.1 | 38.7 | 19.3 | 3.9 | 0.9 | 3.4 | 507.3 | 498.8 | 488.7 | 467.9 | 550.2 | 425.2 |

Question : To what extent do students with special needs limit how you teach the TIMSS class?
Location : TQP3-22C (PT2GLI03)

| Country | Sample | Valid N | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted |
|-----------------------|--------|---------|--------|--------|--------|------|---------|---------|--------|--------|--------|-------|---------|---------|
| | | | AT ALL | LITTLE | | LOT | Adminis | | AT ALL | LITTLE | | LOT | Adminis | |
| | | | % | % | % | % | tered | % | Mean | Mean | Mean | Mean | tered | Mean |
| Armenia | 58 | 44 | 34.7 | 14.5 | 39.2 | 11.5 | 0.0 | 27.0 | 472.9 | 497.1 | 530.2 | 469.1 | . | 483.6 |
| Iran, Islamic Rep. of | 155 | 152 | 32.7 | 33.4 | 22.2 | 11.7 | 0.0 | 1.1 | 474.6 | 470.7 | 433.7 | 440.1 | . | 428.0 |
| Italy | 115 | 114 | 47.3 | 30.2 | 17.0 | 5.5 | 0.0 | 1.1 | 436.5 | 407.9 | 422.8 | 407.4 | . | 270.8 |
| Lebanon | 239 | 221 | 44.7 | 30.5 | 14.7 | 10.2 | 0.0 | 8.0 | 441.1 | 449.8 | 418.8 | 457.0 | . | 459.7 |
| Netherlands | 119 | 112 | 52.2 | 43.1 | 4.7 | . | 5.8 | 0.0 | 586.5 | 578.0 | 588.1 | . | 576.0 | . |
| Norway | 129 | 126 | 63.1 | 26.0 | 10.0 | 0.9 | 0.4 | 1.6 | 529.9 | 540.1 | 538.2 | 520.9 | 595.9 | 569.1 |
| Russian Federation | 158 | 156 | 43.3 | 30.7 | 19.9 | 6.1 | 0.0 | 1.7 | 520.3 | 504.4 | 522.2 | 593.4 | . | 578.7 |
| Slovenia | 66 | 65 | 61.8 | 30.3 | 4.1 | 3.7 | 0.0 | 2.1 | 530.8 | 545.9 | 526.6 | 513.6 | . | 553.9 |
| Sweden | 155 | 148 | 55.7 | 39.2 | 5.1 | . | 2.0 | 2.9 | 499.5 | 497.6 | 483.0 | . | 478.5 | 478.1 |
| International Avg. | 133 | 126 | 48.4 | 30.9 | 15.2 | 7.1 | 0.9 | 5.0 | 499.1 | 499.0 | 496.0 | 485.9 | 550.2 | 477.7 |

Question : To what extent do uninterested students limit how you teach the TIMSS class?
Location : TQP3-22D (PT2GLI04)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 11.7 | 15.8 | 44.4 | 28.1 | 0.0 | 21.0 | 469.5 | 475.7 | 488.7 | 530.5 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 153 | 8.2 | 22.9 | 31.4 | 37.5 | 0.0 | 0.9 | 465.2 | 486.6 | 468.2 | 436.4 | . | 417.5 |
| Italy | 115 | 114 | 3.8 | 20.9 | 43.7 | 31.6 | 0.0 | 1.1 | 431.9 | 446.6 | 426.5 | 404.4 | . | 270.8 |
| Lebanon | 239 | 227 | 11.6 | 48.0 | 24.6 | 15.7 | 0.0 | 6.1 | 459.5 | 443.2 | 440.8 | 429.1 | . | 462.0 |
| Netherlands | 119 | 112 | 7.0 | 42.9 | 42.6 | 7.6 | 5.8 | 0.0 | 597.0 | 581.8 | 583.5 | 573.1 | 576.0 | . |
| Norway | 129 | 127 | 16.7 | 52.1 | 28.6 | 2.6 | 1.2 | 0.0 | 542.2 | 528.9 | 540.2 | 503.9 | 565.6 | . |
| Russian Federation | 158 | 157 | 6.8 | 19.4 | 37.9 | 36.0 | 0.0 | 0.8 | 594.3 | 532.9 | 522.7 | 497.9 | . | 594.0 |
| Slovenia | 66 | 65 | 13.8 | 32.3 | 27.2 | 26.7 | 0.0 | 1.4 | 577.9 | 520.7 | 536.0 | 530.6 | . | 500.5 |
| Sweden | 155 | 148 | 10.5 | 46.7 | 31.0 | 11.8 | 2.0 | 2.9 | 526.3 | 510.7 | 473.4 | 486.6 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 10.0 | 33.4 | 34.6 | 22.0 | 1.0 | 3.8 | 518.2 | 503.0 | 497.8 | 488.1 | 540.0 | 458.7 |

Question : To what extent do disruptive students limit how you teach the TIMSS class?
 Location : TQP3-22E (PT2GLI05)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 28.9 | 11.7 | 39.6 | 19.8 | 0.0 | 21.0 | 481.9 | 571.9 | 480.0 | 504.5 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 154 | 23.5 | 29.1 | 34.2 | 13.1 | 0.0 | 0.3 | 494.1 | 454.4 | 440.6 | 461.5 | . | 428.5 |
| Italy | 115 | 114 | 24.3 | 31.0 | 24.0 | 20.7 | 0.0 | 1.1 | 445.7 | 407.3 | 423.3 | 424.0 | . | 270.8 |
| Lebanon | 239 | 222 | 17.9 | 41.2 | 27.0 | 13.9 | 0.0 | 7.6 | 453.9 | 444.7 | 437.5 | 437.1 | . | 445.5 |
| Netherlands | 119 | 112 | 33.5 | 35.9 | 29.7 | 0.9 | 5.8 | 0.0 | 593.5 | 582.9 | 572.1 | 544.9 | 576.0 | . |
| Norway | 129 | 128 | 49.6 | 32.4 | 14.6 | 3.4 | 0.4 | 0.0 | 537.9 | 529.3 | 525.7 | 553.8 | 595.9 | . |
| Russian Federation | 158 | 157 | 30.6 | 24.7 | 24.2 | 20.5 | 0.0 | 0.8 | 520.9 | 548.7 | 513.5 | 494.7 | . | 594.0 |
| Slovenia | 66 | 66 | 24.4 | 29.7 | 21.2 | 24.7 | 0.0 | 0.0 | 546.7 | 535.7 | 522.1 | 533.4 | . | . |
| Sweden | 155 | 148 | 48.5 | 33.6 | 12.9 | 4.9 | 2.0 | 2.9 | 508.7 | 492.8 | 475.3 | 485.1 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 31.3 | 29.9 | 25.3 | 13.5 | 0.9 | 3.7 | 509.3 | 507.5 | 487.8 | 493.2 | 550.2 | 450.8 |

Question : To what extent does a shortage of graphing calculators limit how you teach the TIMSS class?
 Location : TQP3-22F (PT2GLI06)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 45 | 16.3 | 27.8 | 30.9 | 25.0 | 0.0 | 26.5 | 478.6 | 510.6 | 504.9 | 464.1 | . | 501.2 |
| Iran, Islamic Rep. of | 155 | 150 | 51.1 | 22.6 | 13.1 | 13.2 | 0.0 | 2.3 | 472.7 | 441.1 | 442.1 | 457.7 | . | 470.7 |
| Italy | 115 | 114 | 48.7 | 46.8 | 2.9 | 1.6 | 0.0 | 1.1 | 440.6 | 408.1 | 423.2 | 380.4 | . | 270.8 |
| Lebanon | 239 | 223 | 52.0 | 25.6 | 10.1 | 12.3 | 0.5 | 6.7 | 450.1 | 446.5 | 438.4 | 415.2 | 510.6 | 436.5 |
| Netherlands | 119 | 112 | 87.5 | 11.3 | 1.2 | . | 5.8 | 0.0 | 582.5 | 587.4 | 570.2 | . | 576.0 | . |
| Norway | 129 | 128 | 87.4 | 11.4 | 1.2 | . | 0.4 | 0.0 | 532.3 | 545.9 | 531.5 | . | 595.9 | . |
| Russian Federation | 158 | 154 | 47.0 | 21.8 | 22.0 | 9.3 | 0.0 | 2.4 | 532.3 | 526.2 | 499.9 | 515.6 | . | 476.7 |
| Slovenia | 66 | 66 | 69.1 | 22.7 | 6.6 | 1.6 | 0.0 | 0.0 | 540.5 | 527.6 | 490.6 | 582.5 | . | . |
| Sweden | 155 | 148 | 91.1 | 7.8 | 0.2 | 0.9 | 2.0 | 2.9 | 498.7 | 486.0 | 470.5 | 521.3 | 478.5 | 478.1 |
| International Avg. | 133 | 127 | 61.1 | 22.0 | 9.8 | 9.1 | 1.0 | 4.7 | 503.1 | 497.7 | 485.7 | 476.7 | 540.3 | 439.0 |

Question : To what extent does a shortage of computer hardware limit how you teach the TIMSS class?
 Location : TQP3-22G (PT2GLI07)

| Country | Sample | Valid N | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted |
|-----------------------|--------|---------|--------|--------|--------|------|---------|---------|--------|--------|--------|-------|---------|---------|
| | | | AT ALL | LITTLE | | LOT | Adminis | | AT ALL | LITTLE | | LOT | Adminis | |
| | | | % | % | % | % | tered | % | Mean | Mean | Mean | Mean | tered | Mean |
| Armenia | 58 | 48 | 11.2 | 20.0 | 35.5 | 33.3 | 0.0 | 23.2 | 440.6 | 524.8 | 497.3 | 495.9 | . | 489.3 |
| Iran, Islamic Rep. of | 155 | 153 | 40.7 | 25.8 | 18.4 | 15.1 | 0.0 | 1.4 | 475.3 | 455.7 | 455.6 | 431.2 | . | 450.2 |
| Italy | 115 | 114 | 47.4 | 36.2 | 14.5 | 1.9 | 0.0 | 1.1 | 432.4 | 418.2 | 405.0 | 464.9 | . | 270.8 |
| Lebanon | 239 | 217 | 31.9 | 35.4 | 21.2 | 11.5 | 0.7 | 8.3 | 446.4 | 456.9 | 437.3 | 417.3 | 442.0 | 429.3 |
| Netherlands | 119 | 112 | 43.7 | 29.5 | 21.5 | 5.3 | 5.8 | 0.0 | 589.0 | 574.7 | 580.9 | 585.7 | 576.0 | . |
| Norway | 129 | 128 | 57.3 | 22.9 | 15.4 | 4.4 | 0.4 | 0.0 | 532.6 | 536.2 | 537.6 | 525.3 | 595.9 | . |
| Russian Federation | 158 | 155 | 23.7 | 18.1 | 40.5 | 17.7 | 0.0 | 1.6 | 505.6 | 514.6 | 536.9 | 507.7 | . | 580.3 |
| Slovenia | 66 | 66 | 43.9 | 30.7 | 20.7 | 4.7 | 0.0 | 0.0 | 548.6 | 523.3 | 525.6 | 525.3 | . | . |
| Sweden | 155 | 148 | 55.0 | 27.4 | 16.8 | 0.8 | 2.0 | 2.9 | 501.3 | 494.6 | 491.4 | 513.3 | 478.5 | 478.1 |
| International Avg. | 133 | 127 | 39.4 | 27.3 | 22.7 | 10.5 | 1.0 | 4.3 | 496.9 | 499.9 | 496.4 | 496.3 | 523.1 | 449.7 |

Question : To what extent does a shortage of computer software limit how you teach the TIMSS class?
 Location : TQP3-22H (PT2GLI08)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 47 | 5.0 | 14.8 | 46.2 | 34.0 | 0.0 | 24.1 | 437.6 | 526.6 | 490.7 | 503.3 | . | 484.2 |
| Iran, Islamic Rep. of | 155 | 152 | 32.0 | 23.5 | 24.5 | 20.0 | 0.0 | 1.8 | 473.8 | 472.6 | 454.7 | 430.8 | . | 441.0 |
| Italy | 115 | 114 | 39.6 | 43.9 | 14.0 | 2.4 | 0.0 | 1.1 | 442.3 | 407.3 | 423.2 | 428.6 | . | 270.8 |
| Lebanon | 239 | 222 | 34.2 | 26.5 | 19.6 | 19.7 | 0.2 | 7.0 | 444.3 | 462.2 | 440.9 | 426.2 | 463.4 | 425.6 |
| Netherlands | 119 | 112 | 48.3 | 27.9 | 18.6 | 5.2 | 5.8 | 0.0 | 589.5 | 573.7 | 578.5 | 586.4 | 576.0 | . |
| Norway | 129 | 128 | 47.1 | 38.6 | 12.7 | 1.6 | 0.4 | 0.0 | 531.6 | 536.5 | 534.4 | 532.3 | 595.9 | . |
| Russian Federation | 158 | 156 | 17.4 | 21.7 | 43.3 | 17.6 | 0.0 | 1.7 | 517.8 | 505.2 | 543.5 | 485.6 | . | 563.9 |
| Slovenia | 66 | 66 | 41.8 | 30.9 | 24.2 | 3.1 | 0.0 | 0.0 | 552.7 | 518.8 | 523.7 | 545.0 | . | . |
| Sweden | 155 | 148 | 52.4 | 30.9 | 13.9 | 2.8 | 2.0 | 2.9 | 502.5 | 492.1 | 490.2 | 513.2 | 478.5 | 478.1 |
| International Avg. | 133 | 127 | 35.3 | 28.7 | 24.1 | 11.8 | 0.9 | 4.3 | 499.1 | 499.4 | 497.8 | 494.6 | 528.5 | 443.9 |

Question : To what extent does a shortage of support for using computers limit how you teach the TIMSS class?
 Location : TQP3-22I (PT2GLI09)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 47 | 7.2 | 23.1 | 32.9 | 36.9 | 0.0 | 24.1 | 494.3 | 508.1 | 527.9 | 464.9 | . | 484.2 |
| Iran, Islamic Rep. of | 155 | 151 | 33.4 | 25.9 | 24.1 | 16.6 | 0.0 | 2.6 | 471.6 | 468.3 | 450.3 | 441.7 | . | 429.0 |
| Italy | 115 | 114 | 44.9 | 35.4 | 14.1 | 5.7 | 0.0 | 1.1 | 441.1 | 403.0 | 423.2 | 419.8 | . | 270.8 |
| Lebanon | 239 | 218 | 34.9 | 26.5 | 20.9 | 17.6 | 0.0 | 9.7 | 448.8 | 452.9 | 445.9 | 423.3 | . | 431.7 |
| Netherlands | 119 | 112 | 41.3 | 35.1 | 16.3 | 7.3 | 5.8 | 0.0 | 585.1 | 585.8 | 564.1 | 598.7 | 576.0 | . |
| Norway | 129 | 127 | 43.8 | 38.6 | 14.8 | 2.8 | 0.4 | 1.0 | 524.9 | 541.3 | 541.5 | 535.3 | 595.9 | 521.6 |
| Russian Federation | 158 | 154 | 20.6 | 24.7 | 35.5 | 19.2 | 0.0 | 2.1 | 516.6 | 510.9 | 538.8 | 505.0 | . | 539.1 |
| Slovenia | 66 | 66 | 55.5 | 24.6 | 15.3 | 4.6 | 0.0 | 0.0 | 536.3 | 535.0 | 529.7 | 536.0 | . | . |
| Sweden | 155 | 148 | 48.2 | 29.7 | 17.6 | 4.5 | 2.0 | 2.9 | 505.8 | 495.0 | 480.2 | 501.6 | 478.5 | 478.1 |
| International Avg. | 133 | 126 | 36.6 | 29.3 | 21.3 | 12.8 | 0.9 | 4.8 | 502.7 | 500.0 | 500.2 | 491.8 | 550.2 | 450.7 |

Question : To what extent does a shortage of textbooks for students' use limit how you teach the TIMSS class?
 Location : TQP3-22J (PT2GLI10)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 73.2 | 6.6 | 8.4 | 11.8 | 0.0 | 21.0 | 501.0 | 475.3 | 483.1 | 487.1 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 154 | 60.8 | 16.0 | 13.8 | 9.4 | 0.0 | 0.3 | 469.2 | 433.5 | 466.9 | 435.2 | . | 428.5 |
| Italy | 115 | 114 | 50.8 | 29.4 | 17.4 | 2.4 | 0.0 | 1.1 | 435.8 | 406.2 | 422.9 | 396.2 | . | 270.8 |
| Lebanon | 239 | 225 | 39.1 | 29.7 | 19.8 | 11.5 | 0.0 | 6.2 | 457.0 | 434.6 | 434.1 | 441.2 | . | 436.0 |
| Netherlands | 119 | 112 | 90.3 | 9.7 | . | . | 5.8 | 0.0 | 582.2 | 588.9 | . | . | 576.0 | . |
| Norway | 129 | 128 | 93.7 | 5.3 | 1.0 | . | 0.4 | 0.0 | 535.6 | 507.2 | 513.5 | . | 595.9 | . |
| Russian Federation | 158 | 153 | 61.0 | 12.6 | 16.5 | 9.9 | 0.4 | 2.2 | 522.2 | 502.8 | 520.1 | 530.1 | 590.4 | 555.9 |
| Slovenia | 66 | 66 | 63.4 | 26.7 | 4.0 | 5.9 | 0.0 | 0.0 | 538.4 | 520.5 | 537.2 | 562.1 | . | . |
| Sweden | 155 | 148 | 91.9 | 6.4 | 0.8 | 0.9 | 2.0 | 2.9 | 499.7 | 467.6 | 500.3 | 521.3 | 478.5 | 478.1 |
| International Avg. | 133 | 128 | 69.4 | 15.8 | 10.2 | 7.4 | 1.0 | 3.7 | 504.6 | 481.8 | 484.7 | 481.9 | 560.2 | 442.9 |

Question : To what extent does a shortage of other instructional equipment for students' use limit how you teach the TIMSS class?
 Location : TQP3-22K (PT2GLI11)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 49 | 34.5 | 27.3 | 27.6 | 10.5 | 0.0 | 21.0 | 504.4 | 498.3 | 491.3 | 476.1 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 154 | 14.8 | 28.5 | 41.1 | 15.7 | 0.0 | 0.3 | 465.4 | 482.6 | 447.6 | 446.0 | . | 428.5 |
| Italy | 115 | 114 | 30.3 | 40.6 | 28.2 | 0.9 | 0.0 | 1.1 | 462.4 | 402.9 | 411.5 | 466.6 | . | 270.8 |
| Lebanon | 239 | 220 | 23.8 | 46.3 | 21.3 | 8.6 | 0.0 | 8.6 | 451.7 | 442.2 | 449.6 | 407.8 | . | 448.0 |
| Netherlands | 119 | 111 | 71.7 | 23.7 | 3.9 | 0.7 | 5.8 | 0.8 | 587.0 | 572.3 | 577.2 | 606.8 | 576.0 | 544.9 |
| Norway | 129 | 128 | 45.6 | 37.7 | 16.7 | . | 0.4 | 0.0 | 536.4 | 531.0 | 533.3 | . | 595.9 | . |
| Russian Federation | 158 | 154 | 38.2 | 22.1 | 31.4 | 8.3 | 0.4 | 1.8 | 515.9 | 521.6 | 525.3 | 516.2 | 590.4 | 566.4 |
| Slovenia | 66 | 65 | 41.1 | 42.0 | 12.9 | 4.0 | 0.0 | 1.7 | 539.3 | 525.5 | 549.3 | 573.3 | . | 469.2 |
| Sweden | 155 | 148 | 47.5 | 36.1 | 11.7 | 4.7 | 2.0 | 2.9 | 502.0 | 499.6 | 485.5 | 473.1 | 478.5 | 478.1 |
| International Avg. | 133 | 127 | 38.6 | 33.8 | 21.7 | 6.7 | 1.0 | 4.3 | 507.2 | 497.3 | 496.7 | 495.8 | 560.2 | 461.7 |

Question : To what extent does a shortage of equipment for your use in demonstrations and other exercises limit how you teach the TIMSS class?
 Location : TQP3-22L (PT2GLI12)

| Country | Sample | Valid N | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted |
|-----------------------|--------|---------|--------|--------|--------|------|---------|---------|--------|--------|--------|-------|---------|---------|
| | | | AT ALL | LITTLE | | LOT | Adminis | | AT ALL | LITTLE | | LOT | Adminis | |
| | | | % | % | % | % | tered | % | Mean | Mean | Mean | Mean | tered | Mean |
| Armenia | 58 | 49 | 11.0 | 37.8 | 25.9 | 25.3 | 0.0 | 21.0 | 509.9 | 508.4 | 480.7 | 487.8 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 151 | 11.2 | 33.8 | 38.2 | 16.8 | 0.0 | 2.4 | 479.5 | 486.4 | 443.8 | 430.8 | . | 452.1 |
| Italy | 115 | 114 | 17.4 | 25.0 | 46.5 | 11.2 | 0.0 | 1.1 | 467.3 | 411.0 | 417.6 | 411.6 | . | 270.8 |
| Lebanon | 239 | 222 | 21.3 | 41.7 | 25.7 | 11.3 | 0.0 | 6.9 | 474.4 | 434.9 | 437.7 | 428.2 | . | 446.8 |
| Netherlands | 119 | 112 | 41.6 | 42.4 | 15.9 | . | 5.8 | 0.0 | 588.6 | 577.7 | 582.0 | . | 576.0 | . |
| Norway | 129 | 128 | 18.3 | 36.7 | 41.5 | 3.4 | 0.4 | 0.0 | 549.4 | 526.9 | 530.2 | 569.6 | 595.9 | . |
| Russian Federation | 158 | 157 | 13.2 | 21.3 | 27.2 | 38.4 | 0.0 | 0.3 | 557.0 | 491.5 | 519.2 | 526.0 | . | 636.1 |
| Slovenia | 66 | 66 | 18.7 | 33.5 | 35.9 | 11.9 | 0.0 | 0.0 | 548.4 | 539.6 | 522.9 | 537.1 | . | . |
| Sweden | 155 | 147 | 36.3 | 42.6 | 17.1 | 4.0 | 2.0 | 3.4 | 504.5 | 499.0 | 486.3 | 473.8 | 478.5 | 483.1 |
| International Avg. | 133 | 127 | 21.0 | 35.0 | 30.4 | 15.3 | 0.9 | 3.9 | 519.9 | 497.3 | 491.2 | 483.1 | 550.2 | 462.8 |

Question : To what extent do inadequate physical facilities limit how you teach the TIMSS class?
 Location : TQP3-22M (PT2GLI13)

| Country | Sample | Valid N | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted | 1.NOT | 2.A | 3.SOME | 4.A | Not | Omitted |
|-----------------------|--------|---------|--------|--------|--------|------|---------|---------|--------|--------|--------|-------|---------|---------|
| | | | AT ALL | LITTLE | | LOT | Adminis | | AT ALL | LITTLE | | LOT | Adminis | |
| | | | % | % | % | % | tered | % | Mean | Mean | Mean | Mean | tered | Mean |
| Armenia | 58 | 49 | 27.7 | 27.0 | 31.1 | 14.1 | 0.0 | 21.0 | 508.4 | 498.4 | 485.5 | 491.3 | . | 488.0 |
| Iran, Islamic Rep. of | 155 | 153 | 18.7 | 28.2 | 34.8 | 18.3 | 0.0 | 1.5 | 482.8 | 447.4 | 454.4 | 460.9 | . | 523.0 |
| Italy | 115 | 114 | 16.3 | 34.8 | 37.8 | 11.1 | 0.0 | 1.1 | 465.9 | 402.8 | 430.9 | 404.8 | . | 270.8 |
| Lebanon | 239 | 210 | 19.6 | 46.3 | 23.7 | 10.3 | 0.0 | 12.6 | 474.1 | 441.9 | 434.3 | 425.0 | . | 435.5 |
| Netherlands | 119 | 112 | 40.0 | 33.5 | 21.8 | 4.8 | 5.8 | 0.0 | 583.3 | 581.4 | 586.7 | 572.9 | 576.0 | . |
| Norway | 129 | 128 | 55.8 | 31.6 | 12.6 | . | 0.4 | 0.0 | 534.1 | 532.7 | 535.8 | . | 595.9 | . |
| Russian Federation | 158 | 156 | 36.0 | 22.8 | 24.9 | 16.3 | 0.0 | 1.3 | 519.3 | 537.2 | 497.1 | 530.0 | . | 641.2 |
| Slovenia | 66 | 65 | 41.7 | 29.1 | 26.2 | 3.0 | 0.0 | 2.5 | 540.8 | 535.9 | 521.6 | 547.8 | . | 551.3 |
| Sweden | 155 | 148 | 42.4 | 32.7 | 15.0 | 10.0 | 2.0 | 2.9 | 506.5 | 490.9 | 491.3 | 494.3 | 478.5 | 478.1 |
| International Avg. | 133 | 126 | 33.1 | 31.8 | 25.3 | 11.0 | 0.9 | 4.8 | 512.8 | 496.5 | 493.1 | 490.9 | 550.2 | 484.0 |

Question : To what extent does a high student/teacher ratio limit how you teach the TIMSS class?
 Location : TQP3-22N (PT2GLI14)

| Country | Sample | Valid N | 1.NOT AT ALL % | 2.A LITTLE % | 3.SOME % | 4.A LOT % | Not Adminis- tered % | Omitted % | 1.NOT Mean | 2.A Mean | 3.SOME Mean | 4.A Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|----------------------|--------------------|-------------|-----------------|-------------------------------|--------------|---------------|-------------|----------------|-------------|----------------------------------|-----------------|
| Armenia | 58 | 47 | 45.1 | 25.6 | 16.5 | 12.8 | 0.0 | 24.1 | 513.2 | 510.0 | 443.2 | 488.3 | . | 484.2 |
| Iran, Islamic Rep. of | 155 | 152 | 27.7 | 20.4 | 30.6 | 21.2 | 0.0 | 1.5 | 482.2 | 453.4 | 467.3 | 428.5 | . | 425.3 |
| Italy | 115 | 114 | 20.8 | 34.7 | 28.7 | 15.8 | 0.0 | 1.1 | 465.8 | 406.5 | 416.6 | 420.4 | . | 270.8 |
| Lebanon | 239 | 208 | 37.5 | 30.6 | 22.6 | 9.2 | 0.5 | 12.2 | 453.6 | 429.8 | 441.9 | 452.4 | 502.1 | 441.1 |
| Netherlands | 119 | 111 | 49.7 | 25.1 | 15.9 | 9.3 | 5.8 | 1.0 | 581.0 | 592.8 | 578.6 | 571.9 | 576.0 | 598.9 |
| Norway | 129 | 128 | 47.8 | 29.6 | 19.3 | 3.3 | 0.4 | 0.0 | 530.1 | 533.6 | 537.8 | 568.1 | 595.9 | . |
| Russian Federation | 158 | 155 | 51.4 | 12.2 | 17.8 | 18.6 | 0.4 | 1.3 | 529.5 | 503.2 | 467.3 | 551.4 | 590.4 | 641.2 |
| Slovenia | 66 | 66 | 15.2 | 25.2 | 33.3 | 26.2 | 0.0 | 0.0 | 538.5 | 524.7 | 522.5 | 558.6 | . | . |
| Sweden | 155 | 148 | 41.3 | 28.2 | 21.3 | 9.2 | 2.0 | 2.9 | 502.6 | 485.6 | 496.5 | 517.5 | 478.5 | 478.1 |
| International Avg. | 133 | 125 | 37.4 | 25.7 | 22.9 | 14.0 | 1.0 | 4.9 | 510.7 | 493.3 | 485.7 | 506.4 | 548.6 | 477.1 |

Question : Approximately what percentage of teaching time will you have spent on mechanics to the TIMSS class by the end of this school year?
 Location : TQP3-23A (PT2PPTME)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|------|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 23.2 | 26.3 | 30.0 | 0.0 | 5.0 | 20.0 | 20.0 | 30.0 | 30.0 | 35.0 | 40.0 | 45.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 41.6 | 50.0 | 10.0 | 20.0 | 25.0 | 30.0 | 40.0 | 50.0 | 60.0 | 65.0 | 75.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 13.6 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 20.0 | 30.0 | 40.0 | 60.0 |
| Lebanon | 239 | 220 | 0.0 | 9.3 | 32.2 | 30.0 | 0.0 | 20.0 | 25.0 | 30.0 | 30.0 | 36.0 | 40.0 | 40.0 | 50.0 |
| Netherlands | 119 | 111 | 5.8 | 0.5 | 28.8 | 30.0 | 0.0 | 5.0 | 10.0 | 20.0 | 30.0 | 40.0 | 45.0 | 50.0 | 50.0 |
| Norway | 129 | 125 | 0.4 | 3.3 | 38.0 | 40.0 | 20.0 | 25.0 | 30.0 | 30.0 | 40.0 | 40.0 | 50.0 | 50.0 | 65.0 |
| Russian Federation | 158 | 155 | 0.0 | 1.8 | 15.7 | 10.0 | 0.0 | 0.0 | 0.0 | 10.0 | 11.0 | 25.0 | 30.0 | 40.0 | 50.0 |
| Slovenia | 66 | 61 | 0.0 | 6.1 | 21.5 | 20.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 30.0 | 35.0 | 40.0 | 60.0 |
| Sweden | 155 | 142 | 2.0 | 7.2 | 32.6 | 30.0 | 0.0 | 20.0 | 20.0 | 30.0 | 30.0 | 40.0 | 43.0 | 50.0 | 55.0 |
| International Avg. | 133 | 126 | 0.9 | 5.8 | 27.8 | 26.7 | 3.3 | 11.1 | 15.6 | 21.1 | 26.8 | 34.6 | 40.9 | 46.1 | 56.7 |

Question : Approximately what percentage of teaching time will you have spent on electricity and magnetism to the TIMSS class by the end of this school year?
 Location : TQP3-23B (PT2PPTEL)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|------|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 23.2 | 29.2 | 30.0 | 20.0 | 20.0 | 20.0 | 25.0 | 30.0 | 30.0 | 35.0 | 60.0 | 60.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 14.1 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 20.0 | 30.0 | 30.0 | 40.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 64.5 | 80.0 | 0.0 | 20.0 | 30.0 | 50.0 | 70.0 | 80.0 | 90.0 | 90.0 | 95.0 |
| Lebanon | 239 | 220 | 0.0 | 9.3 | 30.8 | 30.0 | 0.0 | 20.0 | 24.0 | 30.0 | 30.0 | 35.0 | 40.0 | 40.0 | 50.0 |
| Netherlands | 119 | 111 | 5.8 | 0.5 | 22.4 | 20.0 | 0.0 | 10.0 | 10.0 | 20.0 | 24.0 | 30.0 | 30.0 | 30.0 | 40.0 |
| Norway | 129 | 125 | 0.4 | 3.3 | 30.1 | 30.0 | 10.0 | 20.0 | 25.0 | 30.0 | 30.0 | 30.0 | 40.0 | 40.0 | 45.0 |
| Russian Federation | 158 | 154 | 0.0 | 2.1 | 32.8 | 30.0 | 0.0 | 10.0 | 15.0 | 25.0 | 30.0 | 40.0 | 50.0 | 60.0 | 80.0 |
| Slovenia | 66 | 61 | 0.0 | 6.1 | 25.7 | 20.0 | 0.0 | 5.0 | 14.0 | 20.0 | 20.0 | 30.0 | 40.0 | 50.0 | 80.0 |
| Sweden | 155 | 142 | 2.0 | 7.2 | 28.8 | 30.0 | 10.0 | 20.0 | 20.0 | 25.0 | 30.0 | 30.0 | 40.0 | 40.0 | 56.0 |
| International Avg. | 133 | 126 | 0.9 | 5.9 | 30.9 | 31.1 | 4.4 | 13.9 | 17.6 | 25.6 | 30.4 | 36.1 | 43.9 | 48.9 | 60.7 |

Question : Approximately what percentage of teaching time will you have spent on heat and temperature to the TIMSS class by the end of this school year?
 Location : TQP3-23C (PT2PPTHE)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 23.2 | 21.4 | 20.0 | 0.0 | 5.0 | 10.0 | 20.0 | 25.0 | 25.0 | 30.0 | 30.0 | 30.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 10.2 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 20.0 | 30.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 7.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 25.0 | 30.0 | 50.0 |
| Lebanon | 239 | 220 | 0.0 | 9.3 | 2.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 10.0 | 20.0 | 25.0 |
| Netherlands | 119 | 111 | 5.8 | 0.5 | 14.8 | 10.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 22.0 | 25.0 | 50.0 |
| Norway | 129 | 125 | 0.4 | 3.3 | 6.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 30.0 |
| Russian Federation | 158 | 155 | 0.0 | 1.8 | 12.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 20.0 | 30.0 | 30.0 | 40.0 |
| Slovenia | 66 | 61 | 0.0 | 6.1 | 15.9 | 20.0 | 0.0 | 3.0 | 5.0 | 10.0 | 20.0 | 20.0 | 25.0 | 30.0 | 40.0 |
| Sweden | 155 | 142 | 2.0 | 7.2 | 10.8 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 |
| International Avg. | 133 | 126 | 0.9 | 5.8 | 11.3 | 7.8 | 0.0 | 0.9 | 2.2 | 5.6 | 11.1 | 15.1 | 21.9 | 25.6 | 36.1 |

Question : Approximately what percentage of teaching time will you have spent on atomic and nuclear physics to the TIMSS class by the end of this school year?
 Location : TQP3-23D (PT2PPTAT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|------|------|------|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 23.2 | 18.3 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 20.0 | 25.0 | 30.0 | 30.0 | 30.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 24.1 | 20.0 | 5.0 | 10.0 | 10.0 | 20.0 | 25.0 | 30.0 | 35.0 | 40.0 | 50.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 12.2 | 10.0 | 0.0 | 0.0 | 0.0 | 5.0 | 10.0 | 20.0 | 20.0 | 30.0 | 50.0 |
| Lebanon | 239 | 219 | 0.0 | 9.6 | 24.2 | 20.0 | 0.0 | 15.0 | 20.0 | 20.0 | 25.0 | 30.0 | 30.0 | 35.0 | 53.0 |
| Netherlands | 119 | 111 | 5.8 | 0.5 | 24.8 | 20.0 | 8.0 | 10.0 | 13.0 | 15.0 | 20.0 | 30.0 | 40.0 | 55.0 | 80.0 |
| Norway | 129 | 125 | 0.4 | 3.3 | 14.9 | 10.0 | 0.0 | 5.0 | 5.0 | 10.0 | 15.0 | 20.0 | 25.0 | 30.0 | 30.0 |
| Russian Federation | 158 | 154 | 0.0 | 2.1 | 18.1 | 20.0 | 0.0 | 5.0 | 10.0 | 10.0 | 19.0 | 23.0 | 30.0 | 35.0 | 60.0 |
| Slovenia | 66 | 61 | 0.0 | 6.1 | 23.9 | 20.0 | 0.0 | 5.0 | 10.0 | 20.0 | 20.0 | 30.0 | 35.0 | 50.0 | 50.0 |
| Sweden | 155 | 142 | 2.0 | 7.2 | 23.8 | 20.0 | 0.0 | 10.0 | 15.0 | 20.0 | 20.0 | 30.0 | 35.0 | 38.0 | 50.0 |
| International Avg. | 133 | 125 | 0.9 | 5.9 | 20.5 | 16.7 | 1.4 | 7.2 | 9.8 | 14.4 | 19.3 | 26.4 | 31.1 | 38.1 | 50.3 |

Question : Approximately what percentage of teaching time will you have spent on <other> to the TIMSS class by the end of this school year?
 Location : TQP3-23E (PT2PPTOT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|------|-----|-----|-----|-----|--------|------|------|------|------|
| Armenia | 58 | 48 | 0.0 | 23.2 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 11.0 | 20.0 | 32.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 10.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.0 | 20.0 | 30.0 | 40.0 | 60.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 2.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 13.0 | 50.0 |
| Lebanon | 239 | 218 | 0.0 | 9.8 | 8.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 15.0 | 20.0 | 25.0 | 50.0 |
| Netherlands | 119 | 111 | 5.8 | 0.5 | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 20.0 | 20.0 | 25.0 | 45.0 |
| Norway | 129 | 124 | 0.4 | 4.3 | 10.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 10.0 | 20.0 | 20.0 | 25.0 | 33.0 |
| Russian Federation | 158 | 154 | 0.0 | 2.1 | 21.6 | 0.0 | 0.0 | 0.0 | 0.0 | 8.0 | 20.0 | 35.0 | 48.0 | 52.0 | 70.0 |
| Slovenia | 66 | 61 | 0.0 | 6.1 | 13.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 20.0 | 30.0 | 57.0 | 75.0 |
| Sweden | 155 | 142 | 2.0 | 7.2 | 4.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 5.0 | 19.0 | 20.0 | 50.0 |
| International Avg. | 133 | 125 | 0.9 | 6.0 | 9.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.9 | 5.8 | 15.6 | 23.1 | 30.8 | 51.7 |

Question : When was the conditions for equilibrium and the dynamics of different types of movement taught to students in the TIMSS class?
 Location : TQP3-24AA (PT2PTP01)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 49 | 65.9 | 29.6 | 4.5 | 0.0 | 20.5 | 505.9 | 478.2 | 450.6 | . | 491.5 |
| Iran, Islamic Rep. of | 155 | 154 | 27.5 | 69.5 | 2.9 | 0.0 | 0.4 | 446.2 | 466.4 | 434.0 | . | 445.3 |
| Italy | 115 | 114 | 95.6 | 1.8 | 2.6 | 0.0 | 1.1 | 422.7 | 388.3 | 493.0 | . | 270.8 |
| Lebanon | 239 | 232 | 88.8 | 8.9 | 2.3 | 0.3 | 1.9 | 442.8 | 443.1 | 457.9 | 357.1 | 474.0 |
| Netherlands | 119 | 110 | 93.7 | 4.8 | 1.5 | 5.8 | 1.5 | 583.7 | 587.0 | 561.3 | 576.0 | 546.7 |
| Norway | 129 | 127 | 31.0 | 58.1 | 10.9 | 0.4 | 0.6 | 525.8 | 541.3 | 518.5 | 595.9 | 515.3 |
| Russian Federation | 158 | 157 | 99.0 | 0.3 | 0.6 | 0.0 | 0.4 | 522.5 | 507.7 | 385.2 | . | 428.5 |
| Slovenia | 66 | 66 | 98.6 | 1.4 | . | 0.0 | 0.0 | 535.4 | 503.0 | . | . | . |
| Sweden | 155 | 143 | 75.7 | 24.3 | . | 2.0 | 7.3 | 500.1 | 488.8 | . | 478.5 | 496.5 |
| International Avg. | 133 | 128 | 75.1 | 22.1 | 3.6 | 0.9 | 3.8 | 498.3 | 489.3 | 471.5 | 501.9 | 458.6 |

Question : When was kinetic and potential energy taught to students in the TIMSS class?
Location : TQP3-24AB (PT2PTP02)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|----------------|---------|---|-------------------------------------|---|----------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 70.6 | 29.4 | . | 0.0 | 26.3 | 506.3 | 472.0 | . | . | 489.3 |
| Iran, Islamic Rep. of | 155 | 155 | 75.9 | 21.4 | 2.7 | 0.0 | 0.0 | 450.9 | 497.6 | 411.9 | . | . |
| Italy | 115 | 114 | 94.9 | 3.2 | 1.9 | 0.0 | 1.1 | 424.6 | 368.8 | 485.0 | . | 270.8 |
| Lebanon | 239 | 228 | 21.3 | 78.7 | . | 1.7 | 1.9 | 455.7 | 440.0 | . | 417.8 | 474.0 |
| Netherlands | 119 | 110 | 91.0 | 8.2 | 0.8 | 5.8 | 1.5 | 583.5 | 580.8 | 618.7 | 576.0 | 546.7 |
| Norway | 129 | 128 | 64.2 | 35.8 | . | 0.4 | 0.0 | 533.2 | 535.0 | . | 595.9 | . |
| Russian Federation | 158 | 157 | 97.3 | 2.1 | 0.6 | 0.0 | 0.4 | 524.1 | 448.0 | 385.2 | . | 428.5 |
| Slovenia | 66 | 66 | 96.1 | 2.4 | 1.4 | 0.0 | 0.0 | 536.8 | 481.2 | 503.0 | . | . |
| Sweden | 155 | 146 | 89.4 | 10.6 | . | 2.0 | 5.2 | 501.4 | 468.4 | . | 478.5 | 486.7 |
| International Avg. | 133 | 128 | 77.8 | 21.3 | 1.5 | 1.1 | 4.0 | 501.8 | 476.9 | 480.8 | 517.1 | 449.3 |

Question : When was mechanical wave phenomena in sound, water, and strings taught to students in the TIMSS class?
 Location : TQP3-24AC (PT2PTP03)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 50.1 | 48.3 | 1.6 | 0.0 | 27.2 | 503.9 | 496.0 | 313.7 | . | 487.2 |
| Iran, Islamic Rep. of | 155 | 155 | 18.9 | 79.0 | 2.1 | 0.0 | 0.0 | 450.4 | 462.7 | 437.0 | . | . |
| Italy | 115 | 114 | 79.5 | 10.5 | 10.0 | 0.0 | 1.1 | 425.1 | 429.0 | 409.0 | . | 270.8 |
| Lebanon | 239 | 231 | 83.5 | 11.7 | 4.8 | 0.2 | 2.1 | 444.6 | 433.3 | 435.8 | 488.2 | 468.8 |
| Netherlands | 119 | 110 | 80.4 | 18.8 | 0.8 | 5.8 | 1.5 | 582.9 | 584.8 | 618.7 | 576.0 | 546.7 |
| Norway | 129 | 127 | 97.0 | 2.5 | 0.5 | 0.4 | 1.1 | 534.3 | 507.7 | 529.6 | 595.9 | 556.9 |
| Russian Federation | 158 | 157 | 57.7 | 41.5 | 0.9 | 0.0 | 0.4 | 513.4 | 533.9 | 482.4 | . | 428.5 |
| Slovenia | 66 | 66 | 48.2 | 49.9 | 1.8 | 0.0 | 0.0 | 533.9 | 534.5 | 576.2 | . | . |
| Sweden | 155 | 146 | 36.1 | 63.3 | 0.7 | 2.0 | 4.6 | 502.8 | 495.4 | 517.5 | 478.5 | 478.8 |
| International Avg. | 133 | 128 | 61.3 | 36.2 | 2.6 | 0.9 | 4.2 | 499.0 | 497.5 | 480.0 | 534.7 | 462.5 |

Question : When was forces taught to students in the TIMSS class?
Location : TQP3-24AD (PT2PTP04)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 48 | 79.5 | 20.5 | . | 0.0 | 24.4 | 502.6 | 478.1 | . | . | 484.8 |
| Iran, Islamic Rep. of | 155 | 155 | 41.3 | 58.7 | . | 0.0 | 0.0 | 446.0 | 469.6 | . | . | . |
| Italy | 115 | 114 | 95.6 | 1.8 | 2.6 | 0.0 | 1.1 | 422.7 | 388.3 | 493.0 | . | 270.8 |
| Lebanon | 239 | 227 | 84.3 | 11.9 | 3.8 | 1.8 | 3.6 | 446.7 | 426.7 | 436.1 | 445.7 | 430.8 |
| Netherlands | 119 | 110 | 95.9 | 4.1 | . | 5.8 | 1.5 | 583.8 | 577.3 | . | 576.0 | 546.7 |
| Norway | 129 | 127 | 46.6 | 53.4 | . | 1.7 | 0.0 | 532.4 | 535.9 | . | 526.4 | . |
| Russian Federation | 158 | 157 | 97.4 | 1.9 | 0.6 | 0.0 | 0.4 | 523.4 | 475.3 | 385.2 | . | 428.5 |
| Slovenia | 66 | 64 | 98.5 | 1.5 | . | 0.0 | 3.5 | 535.6 | 503.0 | . | . | 529.6 |
| Sweden | 155 | 146 | 92.0 | 8.0 | . | 2.0 | 5.2 | 500.2 | 471.9 | . | 478.5 | 486.7 |
| International Avg. | 133 | 128 | 81.2 | 18.0 | 2.3 | 1.3 | 4.4 | 499.3 | 480.7 | 438.1 | 506.7 | 454.0 |

Question : When was circular motion taught to students in the TIMSS class?
 Location : TQP3-24AE (PT2PTP05)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 80.6 | 19.4 | . | 0.0 | 26.3 | 506.7 | 452.8 | . | . | 489.3 |
| Iran, Islamic Rep. of | 155 | 154 | 18.7 | 79.1 | 2.2 | 0.0 | 0.4 | 456.4 | 461.7 | 429.5 | . | 425.2 |
| Italy | 115 | 114 | 92.6 | 4.7 | 2.6 | 0.0 | 1.1 | 424.2 | 380.7 | 493.0 | . | 270.8 |
| Lebanon | 239 | 224 | 87.0 | 8.4 | 4.6 | 2.6 | 2.9 | 442.4 | 461.9 | 440.1 | 427.4 | 443.2 |
| Netherlands | 119 | 109 | 72.3 | 26.9 | 0.8 | 5.8 | 2.6 | 583.6 | 581.6 | 618.7 | 576.0 | 567.3 |
| Norway | 129 | 128 | 3.2 | 96.8 | . | 0.4 | 0.0 | 518.0 | 534.4 | . | 595.9 | . |
| Russian Federation | 158 | 157 | 97.7 | 2.3 | . | 0.0 | 0.4 | 524.4 | 405.7 | . | . | 428.5 |
| Slovenia | 66 | 66 | 96.8 | 3.2 | . | 0.0 | 0.0 | 537.1 | 470.1 | . | . | . |
| Sweden | 155 | 147 | 35.1 | 64.7 | 0.2 | 2.0 | 4.4 | 513.4 | 489.6 | 523.4 | 478.5 | 482.0 |
| International Avg. | 133 | 127 | 64.9 | 33.9 | 2.1 | 1.2 | 4.2 | 500.7 | 470.9 | 500.9 | 519.5 | 443.8 |

Question : When was collision taught to students in the TIMSS class?
 Location : TQP3-24AF (PT2PTP06)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 48 | 76.4 | 23.6 | . | 0.0 | 24.4 | 507.1 | 466.8 | . | . | 484.8 |
| Iran, Islamic Rep. of | 155 | 154 | 21.3 | 29.3 | 49.4 | 0.0 | 0.5 | 442.1 | 452.6 | 472.0 | . | 444.6 |
| Italy | 115 | 114 | 95.0 | 1.9 | 3.1 | 0.0 | 1.1 | 422.1 | 427.5 | 478.1 | . | 270.8 |
| Lebanon | 239 | 232 | 8.9 | 90.2 | 0.9 | 0.0 | 2.2 | 443.8 | 443.2 | 388.2 | . | 475.8 |
| Netherlands | 119 | 110 | 67.1 | 28.7 | 4.2 | 5.8 | 1.5 | 586.5 | 582.9 | 541.2 | 576.0 | 546.7 |
| Norway | 129 | 128 | 4.5 | 95.5 | . | 0.4 | 0.0 | 528.7 | 534.1 | . | 595.9 | . |
| Russian Federation | 158 | 155 | 94.9 | 5.1 | . | 0.6 | 1.1 | 522.5 | 479.3 | . | 569.8 | 581.0 |
| Slovenia | 66 | 66 | 84.8 | 13.8 | 1.4 | 0.0 | 0.0 | 534.4 | 541.4 | 503.0 | . | . |
| Sweden | 155 | 147 | 43.2 | 56.8 | . | 2.0 | 4.4 | 504.3 | 493.2 | . | 478.5 | 482.0 |
| International Avg. | 133 | 128 | 55.1 | 38.3 | 11.8 | 1.0 | 3.9 | 499.1 | 491.2 | 476.5 | 555.1 | 469.4 |

Question : When was the aspects of relativity taught to students in the TIMSS class?
 Location : TQP3-24AG (PT2PTP07)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 45 | 19.1 | 65.0 | 15.9 | 0.0 | 30.2 | 510.1 | 509.7 | 445.1 | . | 482.7 |
| Iran, Islamic Rep. of | 155 | 154 | 3.9 | 7.3 | 88.9 | 0.0 | 0.4 | 432.2 | 440.2 | 461.5 | . | 706.7 |
| Italy | 115 | 114 | 22.1 | 29.2 | 48.7 | 0.0 | 1.1 | 419.4 | 436.0 | 418.7 | . | 270.8 |
| Lebanon | 239 | 230 | 8.1 | 78.6 | 13.2 | 0.0 | 3.3 | 442.4 | 446.3 | 431.2 | . | 429.5 |
| Netherlands | 119 | 110 | 16.3 | 8.9 | 74.8 | 5.8 | 1.5 | 568.9 | 591.5 | 585.8 | 576.0 | 546.7 |
| Norway | 129 | 128 | 3.2 | 67.4 | 29.3 | 0.4 | 0.0 | 518.0 | 531.8 | 540.4 | 595.9 | . |
| Russian Federation | 158 | 156 | 36.5 | 58.0 | 5.5 | 0.0 | 1.5 | 493.8 | 537.1 | 534.0 | . | 526.2 |
| Slovenia | 66 | 64 | 9.0 | 25.9 | 65.2 | 0.0 | 3.2 | 541.0 | 527.4 | 538.5 | . | 507.2 |
| Sweden | 155 | 147 | 9.5 | 51.5 | 39.0 | 2.0 | 4.4 | 500.8 | 507.5 | 484.8 | 478.5 | 482.0 |
| International Avg. | 133 | 128 | 14.2 | 43.5 | 42.3 | 0.9 | 5.1 | 491.8 | 503.1 | 493.3 | 550.2 | 494.0 |

Question : When was electrostatic forces taught to students in the TIMSS class?
Location : TQP3-24BA (PT2PTP08)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|----------------|---------|---|-------------------------------------|---|----------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 49 | 18.3 | 81.7 | . | 0.0 | 20.5 | 490.9 | 496.2 | . | . | 491.5 |
| Iran, Islamic Rep. of | 155 | 155 | 86.8 | 8.3 | 4.9 | 0.0 | 0.0 | 459.5 | 485.7 | 423.2 | . | . |
| Italy | 115 | 114 | 15.2 | 81.8 | 3.0 | 0.0 | 1.1 | 440.4 | 420.3 | 439.7 | . | 270.8 |
| Lebanon | 239 | 231 | 91.4 | 5.0 | 3.5 | 0.2 | 2.5 | 442.9 | 465.9 | 426.1 | 488.2 | 442.0 |
| Netherlands | 119 | 111 | 51.4 | 26.7 | 21.9 | 5.8 | 0.7 | 583.5 | 584.0 | 581.3 | 576.0 | 548.8 |
| Norway | 129 | 128 | 5.8 | 94.2 | . | 0.4 | 0.0 | 504.1 | 535.7 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 92.1 | 7.9 | . | 0.0 | 0.0 | 522.9 | 502.1 | . | . | . |
| Slovenia | 66 | 66 | 85.2 | 14.8 | . | 0.0 | 0.0 | 536.1 | 528.6 | . | . | . |
| Sweden | 155 | 147 | 77.4 | 22.2 | 0.4 | 2.0 | 4.4 | 499.5 | 491.0 | 587.5 | 478.5 | 482.0 |
| International Avg. | 133 | 129 | 58.2 | 38.1 | 6.8 | 0.9 | 3.3 | 497.8 | 501.0 | 491.6 | 534.7 | 447.0 |

Question : When was electrical circuits taught to students in the TIMSS class?
Location : TQP3-24BB (PT2PTP09)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 22.6 | 77.4 | . | 0.0 | 26.1 | 494.8 | 498.9 | . | . | 484.4 |
| Iran, Islamic Rep. of | 155 | 155 | 84.9 | 7.6 | 7.5 | 0.0 | 0.0 | 458.5 | 491.3 | 442.8 | . | . |
| Italy | 115 | 114 | 13.3 | 83.4 | 3.3 | 0.0 | 1.1 | 428.1 | 422.4 | 445.9 | . | 270.8 |
| Lebanon | 239 | 226 | 78.1 | 18.8 | 3.1 | 2.6 | 2.1 | 440.6 | 457.4 | 443.9 | 402.6 | 478.3 |
| Netherlands | 119 | 111 | 94.5 | 5.5 | . | 5.8 | 0.7 | 582.5 | 593.7 | . | 576.0 | 548.8 |
| Norway | 129 | 128 | 86.3 | 13.7 | . | 0.4 | 0.0 | 535.3 | 524.8 | . | 595.9 | . |
| Russian Federation | 158 | 158 | 74.9 | 25.1 | . | 0.0 | 0.0 | 539.2 | 467.7 | . | . | . |
| Slovenia | 66 | 66 | 82.3 | 16.8 | 0.9 | 0.0 | 0.0 | 533.5 | 544.7 | 486.9 | . | . |
| Sweden | 155 | 146 | 82.2 | 13.8 | 4.1 | 2.0 | 5.2 | 499.2 | 493.3 | 487.9 | 478.5 | 486.7 |
| International Avg. | 133 | 128 | 68.8 | 29.1 | 3.8 | 1.2 | 3.9 | 501.3 | 499.3 | 461.5 | 513.3 | 453.8 |

Question : When was magnetic forces taught to students in the TIMSS class?
Location : TQP3-24BC (PT2PTP10)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 22.7 | 75.8 | 1.5 | 0.0 | 26.1 | 523.6 | 494.0 | 313.7 | . | 484.4 |
| Iran, Islamic Rep. of | 155 | 154 | 83.6 | 10.6 | 5.8 | 0.0 | 1.1 | 460.3 | 462.0 | 431.9 | . | 550.4 |
| Italy | 115 | 114 | 8.9 | 85.8 | 5.3 | 0.0 | 1.1 | 414.4 | 424.6 | 429.7 | . | 270.8 |
| Lebanon | 239 | 219 | 46.0 | 48.9 | 5.1 | 4.1 | 2.7 | 447.2 | 444.8 | 420.5 | 417.7 | 442.8 |
| Netherlands | 119 | 111 | 52.0 | 46.5 | 1.5 | 5.8 | 0.7 | 583.5 | 583.3 | 567.6 | 576.0 | 548.8 |
| Norway | 129 | 128 | 2.5 | 97.5 | . | 0.4 | 0.0 | 507.7 | 534.5 | . | 595.9 | . |
| Russian Federation | 158 | 157 | 27.9 | 71.8 | 0.2 | 1.0 | 0.0 | 552.2 | 512.0 | 606.3 | 292.7 | . |
| Slovenia | 66 | 66 | 58.4 | 40.7 | 0.9 | 0.0 | 0.0 | 533.5 | 538.1 | 486.9 | . | . |
| Sweden | 155 | 147 | 14.3 | 78.2 | 7.5 | 2.0 | 4.4 | 506.3 | 498.3 | 479.7 | 478.5 | 482.0 |
| International Avg. | 133 | 127 | 35.1 | 61.8 | 3.5 | 1.5 | 4.0 | 503.2 | 499.1 | 467.0 | 472.2 | 463.2 |

Question : When was electromagnetic radiation taught to students in the TIMSS class?
 Location : TQP3-24BD (PT2PTP11)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 9.9 | 83.5 | 6.6 | 0.0 | 26.1 | 490.8 | 506.0 | 406.8 | . | 484.4 |
| Iran, Islamic Rep. of | 155 | 155 | 17.8 | 79.5 | 2.7 | 0.0 | 0.0 | 450.5 | 460.7 | 495.6 | . | . |
| Italy | 115 | 114 | 10.5 | 57.2 | 32.3 | 0.0 | 1.1 | 455.3 | 414.3 | 430.8 | . | 270.8 |
| Lebanon | 239 | 227 | 28.7 | 67.1 | 4.2 | 0.6 | 3.4 | 442.9 | 444.8 | 448.0 | 432.2 | 420.5 |
| Netherlands | 119 | 111 | 29.8 | 66.0 | 4.1 | 5.8 | 0.7 | 594.5 | 578.2 | 580.5 | 576.0 | 548.8 |
| Norway | 129 | 128 | 53.2 | 44.2 | 2.6 | 0.4 | 0.0 | 536.6 | 529.4 | 553.7 | 595.9 | . |
| Russian Federation | 158 | 158 | 6.7 | 91.6 | 1.7 | 0.0 | 0.0 | 555.0 | 518.8 | 520.8 | . | . |
| Slovenia | 66 | 66 | 16.6 | 80.2 | 3.2 | 0.0 | 0.0 | 549.4 | 531.6 | 544.6 | . | . |
| Sweden | 155 | 145 | 14.9 | 80.8 | 4.4 | 2.0 | 5.4 | 506.0 | 499.9 | 443.9 | 478.5 | 479.5 |
| International Avg. | 133 | 128 | 20.9 | 72.2 | 6.9 | 1.0 | 4.1 | 509.0 | 498.2 | 491.6 | 520.7 | 440.8 |

Question : When was heat transfer taught to students in the TIMSS class?
 Location : TQP3-24CA (PT2PTPI2)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 48 | 85.5 | 14.5 | . | 0.0 | 22.2 | 496.1 | 492.4 | . | . | 490.6 |
| Iran, Islamic Rep. of | 155 | 155 | 85.9 | 8.2 | 5.9 | 0.0 | 0.0 | 456.4 | 517.4 | 430.1 | . | . |
| Italy | 115 | 114 | 92.1 | 5.0 | 2.9 | 0.0 | 1.1 | 423.2 | 405.1 | 477.3 | . | 270.8 |
| Lebanon | 239 | 223 | 54.6 | 2.5 | 42.9 | 0.0 | 5.7 | 445.5 | 452.1 | 441.1 | . | 438.8 |
| Netherlands | 119 | 111 | 42.2 | 50.4 | 7.4 | 5.8 | 0.7 | 586.0 | 581.7 | 577.2 | 576.0 | 548.8 |
| Norway | 129 | 127 | 96.6 | 3.2 | 0.3 | 1.0 | 0.0 | 536.2 | 509.3 | 408.8 | 450.6 | . |
| Russian Federation | 158 | 157 | 97.3 | 2.7 | . | 0.0 | 0.4 | 522.2 | 499.6 | . | . | 428.5 |
| Slovenia | 66 | 66 | 98.6 | . | 1.4 | 0.0 | 0.0 | 535.4 | . | 503.0 | . | . |
| Sweden | 155 | 145 | 91.3 | 5.0 | 3.6 | 2.0 | 5.7 | 499.4 | 481.9 | 493.0 | 478.5 | 481.5 |
| International Avg. | 133 | 127 | 82.7 | 11.4 | 9.2 | 1.0 | 4.0 | 500.1 | 492.4 | 475.8 | 501.7 | 443.2 |

Question : When was expansion of matters taught to students in the TIMSS class?
 Location : TQP3-24CB (PT2PTPI3)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered % | Omitted % | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered Mean | Omitted Mean |
|-----------------------|--------|---------|--|----------------------------------|--|------------------------------|--------------|---|-------------------------------------|---|---------------------------------|-----------------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 47 | 71.0 | 19.1 | 9.9 | 0.0 | 26.0 | 506.6 | 508.8 | 424.1 | . | 482.0 |
| Iran, Islamic Rep. of | 155 | 155 | 84.3 | 10.9 | 4.7 | 0.0 | 0.0 | 456.7 | 495.2 | 434.7 | . | . |
| Italy | 115 | 115 | 92.2 | 4.9 | 2.9 | 0.0 | 0.0 | 421.4 | 405.1 | 477.3 | . | . |
| Lebanon | 239 | 223 | 40.6 | 3.1 | 56.4 | 0.0 | 6.5 | 439.2 | 435.4 | 446.2 | . | 449.8 |
| Netherlands | 119 | 111 | 35.1 | 59.3 | 5.6 | 5.8 | 0.7 | 584.3 | 583.2 | 575.6 | 576.0 | 548.8 |
| Norway | 129 | 127 | 95.1 | 2.5 | 2.4 | 1.0 | 0.0 | 535.7 | 507.7 | 536.6 | 450.6 | . |
| Russian Federation | 158 | 157 | 97.2 | 2.4 | 0.4 | 0.0 | 0.4 | 522.6 | 487.4 | 494.6 | . | 428.5 |
| Slovenia | 66 | 66 | 98.6 | . | 1.4 | 0.0 | 0.0 | 535.4 | . | 503.0 | . | . |
| Sweden | 155 | 145 | 73.4 | 2.8 | 23.8 | 2.0 | 5.7 | 497.0 | 458.0 | 505.0 | 478.5 | 488.8 |
| International Avg. | 133 | 127 | 76.4 | 13.1 | 12.0 | 1.0 | 4.4 | 499.9 | 485.1 | 488.6 | 501.7 | 479.6 |

Question : When was "black body" taught to students in the TIMSS class?
 Location : TQP3-24CC (PT2PTP14)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-----|---------|---|-------------------------------------|---|-------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 46 | 50.6 | 31.4 | 18.1 | 0.0 | 29.0 | 503.0 | 505.9 | 472.9 | . | 484.7 |
| Iran, Islamic Rep. of | 155 | 154 | 16.7 | 78.0 | 5.3 | 0.0 | 0.4 | 466.8 | 461.0 | 425.9 | . | 407.2 |
| Italy | 115 | 114 | 55.2 | 19.5 | 25.3 | 0.0 | 1.1 | 420.5 | 423.2 | 432.0 | . | 270.8 |
| Lebanon | 239 | 219 | 19.5 | 7.4 | 73.2 | 0.0 | 7.8 | 444.7 | 447.1 | 442.8 | . | 443.7 |
| Netherlands | 119 | 111 | 11.2 | 76.0 | 12.9 | 5.8 | 0.7 | 573.2 | 583.2 | 591.7 | 576.0 | 548.8 |
| Norway | 129 | 126 | 27.0 | 52.3 | 20.7 | 1.5 | 0.0 | 525.3 | 537.6 | 541.4 | 470.5 | . |
| Russian Federation | 158 | 156 | 26.3 | 50.2 | 23.5 | 0.0 | 0.9 | 500.8 | 545.9 | 493.1 | . | 477.5 |
| Slovenia | 66 | 66 | 42.3 | 48.2 | 9.5 | 0.0 | 0.0 | 530.1 | 537.3 | 544.4 | . | . |
| Sweden | 155 | 147 | 10.6 | 70.0 | 19.3 | 2.0 | 4.4 | 494.0 | 502.1 | 485.5 | 478.5 | 482.0 |
| International Avg. | 133 | 127 | 28.8 | 48.1 | 23.1 | 1.0 | 4.9 | 495.4 | 504.8 | 492.2 | 508.3 | 444.9 |

Question : When was the atomic structure taught to students in the TIMSS class?
 Location : TQP3-24DA (PT2PTP15)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 48 | 21.2 | 61.3 | 17.5 | 0.0 | 21.4 | 546.6 | 486.5 | 461.0 | . | 493.3 |
| Iran, Islamic Rep. of | 155 | 154 | 17.2 | 77.6 | 5.2 | 0.0 | 0.7 | 445.9 | 463.2 | 441.3 | . | 580.8 |
| Italy | 115 | 114 | 19.2 | 44.5 | 36.4 | 0.0 | 1.1 | 421.5 | 418.2 | 432.2 | . | 270.8 |
| Lebanon | 239 | 234 | 16.1 | 78.9 | 5.0 | 0.0 | 1.6 | 454.0 | 441.8 | 427.5 | . | 471.0 |
| Netherlands | 119 | 110 | 23.0 | 73.2 | 3.8 | 5.8 | 1.5 | 586.3 | 583.8 | 561.5 | 576.0 | 546.7 |
| Norway | 129 | 128 | 94.8 | 2.5 | 2.7 | 0.4 | 0.0 | 534.4 | 507.7 | 537.8 | 595.9 | . |
| Russian Federation | 158 | 158 | 6.4 | 81.2 | 12.4 | 0.0 | 0.0 | 431.7 | 527.8 | 524.6 | . | . |
| Slovenia | 66 | 66 | 28.6 | 63.9 | 7.5 | 0.0 | 0.0 | 548.3 | 533.8 | 494.3 | . | . |
| Sweden | 155 | 147 | 15.7 | 57.5 | 26.8 | 2.0 | 4.4 | 501.4 | 501.9 | 487.7 | 478.5 | 482.0 |
| International Avg. | 133 | 129 | 26.9 | 60.1 | 13.0 | 0.9 | 3.4 | 496.7 | 496.1 | 485.3 | 550.2 | 474.1 |

Question : When was photoelectric effect taught to students in the TIMSS class?
Location : TQP3-24DB (PT2PTP16)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 45 | 18.1 | 69.8 | 12.1 | 0.0 | 28.0 | 553.5 | 495.8 | 457.2 | . | 476.1 |
| Iran, Islamic Rep. of | 155 | 153 | 17.9 | 77.8 | 4.3 | 0.0 | 1.1 | 448.3 | 463.9 | 413.5 | . | 541.2 |
| Italy | 115 | 114 | 3.2 | 37.6 | 59.2 | 0.0 | 1.1 | 458.9 | 424.0 | 422.0 | . | 270.8 |
| Lebanon | 239 | 233 | 10.9 | 84.4 | 4.6 | 0.0 | 1.7 | 452.4 | 443.2 | 423.3 | . | 455.5 |
| Netherlands | 119 | 110 | 3.8 | 87.7 | 8.5 | 5.8 | 1.5 | 574.7 | 584.7 | 574.9 | 576.0 | 546.7 |
| Norway | 129 | 128 | 19.7 | 47.2 | 33.1 | 0.4 | 0.0 | 526.6 | 533.6 | 538.6 | 595.9 | . |
| Russian Federation | 158 | 158 | 4.1 | 84.8 | 11.1 | 0.0 | 0.0 | 524.9 | 531.9 | 439.2 | . | . |
| Slovenia | 66 | 66 | 23.1 | 62.6 | 14.4 | 0.0 | 0.0 | 564.0 | 532.2 | 500.3 | . | . |
| Sweden | 155 | 147 | 8.7 | 77.0 | 14.3 | 2.0 | 4.4 | 498.2 | 505.2 | 459.3 | 478.5 | 482.0 |
| International Avg. | 133 | 128 | 12.2 | 69.9 | 18.0 | 0.9 | 4.2 | 511.3 | 501.6 | 469.8 | 550.2 | 462.1 |

Question : When was nuclear reactions taught to students in the TIMSS class?
 Location : TQP3-24DC (PT2PTP17)

| Country | Sample | Valid N | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted | 1.MOSTL | 2.MOSTL | 3.NOT | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--|----------------------------------|--|-------------------------|---------|---|-------------------------------------|---|-------------------------|---------|
| | | | Y TAUGHT BEFORE THIS YEAR % | Y TAUGHT THIS YEAR % | YET TAUGHT OR JUST INTRODU CED % | | | Y TAUGHT BEFORE THIS YEAR Mean | Y TAUGHT THIS YEAR Mean | YET TAUGHT OR JUST INTRODU CED Mean | | |
| Armenia | 58 | 49 | 16.1 | 48.7 | 35.2 | 0.0 | 20.5 | 550.9 | 499.3 | 464.0 | . | 491.5 |
| Iran, Islamic Rep. of | 155 | 155 | 9.4 | 69.7 | 20.9 | 0.0 | 0.0 | 450.3 | 461.9 | 457.2 | . | . |
| Italy | 115 | 114 | 4.5 | 10.0 | 85.6 | 0.0 | 1.1 | 427.0 | 389.9 | 427.7 | . | 270.8 |
| Lebanon | 239 | 232 | 9.7 | 71.7 | 18.5 | 0.0 | 2.4 | 440.9 | 443.9 | 440.5 | . | 465.7 |
| Netherlands | 119 | 111 | 4.0 | 85.0 | 11.0 | 5.8 | 0.7 | 545.4 | 586.3 | 572.6 | 576.0 | 548.8 |
| Norway | 129 | 128 | 88.6 | 9.2 | 2.3 | 0.4 | 0.0 | 534.4 | 532.2 | 518.2 | 595.9 | . |
| Russian Federation | 158 | 157 | 3.7 | 68.3 | 28.0 | 0.4 | 0.0 | 400.9 | 532.0 | 510.2 | 560.0 | . |
| Slovenia | 66 | 66 | 19.6 | 57.0 | 23.5 | 0.0 | 0.0 | 560.9 | 538.8 | 504.0 | . | . |
| Sweden | 155 | 146 | 11.9 | 43.9 | 44.2 | 2.0 | 5.0 | 504.3 | 494.1 | 501.2 | 478.5 | 476.6 |
| International Avg. | 133 | 129 | 18.6 | 51.5 | 29.9 | 1.0 | 3.3 | 490.6 | 497.6 | 488.4 | 552.6 | 450.7 |

Question : During physics lessons, how often do you use a computer to demonstrate physics for the whole class?
 Location : TQP3-25 (PT2PHOUC)

| Country | Sample | Valid N | 1.EVERY | 2.ABOUT | 3.SOME | 4.NEVER | Not Adminis tered | Omitted | 1.EVERY | 2.ABOUT | 3.SOME | 4.NEVER | Not Adminis tered | Omitted |
|-----------------------|--------|---------|--------------------------------------|-----------------------------|--------|---------|-------------------------|---------|---|--------------------------------|--------|---------|-------------------------|---------|
| | | | OR ALMOST EVERY LESSON % | HALF THE LESSONS % | | | | | OR ALMOST EVERY LESSON Mean | HALF THE LESSONS Mean | | | | |
| Armenia | 58 | 49 | 4.7 | 4.6 | 58.2 | 32.5 | 0.0 | 17.8 | 492.1 | 535.4 | 520.7 | 455.1 | . | 474.6 |
| Iran, Islamic Rep. of | 155 | 134 | 0.9 | 1.5 | 16.5 | 81.1 | 0.0 | 14.3 | 542.3 | 367.7 | 465.0 | 456.7 | . | 473.4 |
| Italy | 115 | 114 | 2.8 | 1.9 | 59.9 | 35.5 | 0.0 | 1.1 | 337.5 | 435.1 | 425.1 | 428.1 | . | 270.8 |
| Lebanon | 239 | 236 | 2.8 | 7.0 | 35.2 | 55.0 | 0.0 | 0.8 | 474.0 | 420.2 | 454.5 | 437.7 | . | 457.7 |
| Netherlands | 119 | 111 | 4.5 | 10.5 | 73.9 | 11.2 | 5.8 | 0.7 | 595.2 | 569.7 | 584.4 | 582.7 | 576.0 | 548.8 |
| Norway | 129 | 128 | 9.5 | 9.5 | 63.1 | 17.9 | 0.4 | 0.0 | 525.8 | 539.2 | 530.9 | 545.9 | 595.9 | . |
| Russian Federation | 158 | 158 | 9.1 | 19.6 | 50.6 | 20.8 | 0.0 | 0.0 | 501.3 | 536.1 | 529.8 | 495.0 | . | . |
| Slovenia | 66 | 66 | 16.5 | 26.1 | 50.7 | 6.8 | 0.0 | 0.0 | 536.9 | 537.1 | 535.9 | 514.6 | . | . |
| Sweden | 155 | 149 | 2.9 | 1.5 | 76.6 | 19.0 | 2.0 | 0.5 | 437.9 | 521.2 | 500.1 | 493.2 | 478.5 | 487.1 |
| International Avg. | 133 | 127 | 6.0 | 9.1 | 53.9 | 31.1 | 0.9 | 3.9 | 493.7 | 495.7 | 505.2 | 489.9 | 550.2 | 452.1 |

Question : Do the students in the TIMSS class use calculators during physics lessons?
Location : TQP3-26AA (PT2PSUCA)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 51 | 97.8 | 2.2 | 0.0 | 14.9 | 500.8 | 422.9 | . | 467.7 |
| Iran, Islamic Rep. of | 155 | 155 | 86.7 | 13.3 | 0.0 | 0.0 | 459.1 | 464.7 | . | . |
| Italy | 115 | 114 | 100.0 | . | 0.0 | 1.1 | 423.9 | . | . | 270.8 |
| Lebanon | 239 | 236 | 100.0 | . | 0.0 | 0.8 | 443.4 | . | . | 457.7 |
| Netherlands | 119 | 111 | 100.0 | . | 5.8 | 0.7 | 583.2 | . | 576.0 | 548.8 |
| Norway | 129 | 128 | 99.2 | 0.8 | 0.4 | 0.0 | 533.7 | 552.1 | 595.9 | . |
| Russian Federation | 158 | 158 | 100.0 | . | 0.0 | 0.0 | 521.2 | . | . | . |
| Slovenia | 66 | 66 | 100.0 | . | 0.0 | 0.0 | 535.0 | . | . | . |
| Sweden | 155 | 149 | 100.0 | . | 2.0 | 0.5 | 497.4 | . | 478.5 | 487.1 |
| International Avg. | 133 | 130 | 98.2 | 5.4 | 0.9 | 2.0 | 499.7 | 479.9 | 550.2 | 446.4 |

Question : Do the students in the TIMSS class use computers during physics lessons?
Location : TQP3-26AB (PT2PSUCO)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 51 | 45.2 | 54.8 | 0.0 | 14.9 | 519.6 | 482.2 | . | 467.7 |
| Iran, Islamic Rep. of | 155 | 154 | 20.0 | 80.0 | 0.0 | 0.6 | 481.4 | 454.8 | . | 415.0 |
| Italy | 115 | 114 | 77.7 | 22.3 | 0.0 | 1.1 | 428.5 | 408.1 | . | 270.8 |
| Lebanon | 239 | 235 | 28.5 | 71.5 | 0.0 | 1.9 | 454.7 | 440.0 | . | 407.7 |
| Netherlands | 119 | 111 | 87.7 | 12.3 | 5.8 | 0.7 | 582.4 | 588.3 | 576.0 | 548.8 |
| Norway | 129 | 128 | 80.3 | 19.7 | 0.4 | 0.0 | 530.8 | 546.3 | 595.9 | . |
| Russian Federation | 158 | 157 | 74.7 | 25.3 | 0.0 | 0.2 | 523.7 | 515.2 | . | 394.1 |
| Slovenia | 66 | 66 | 76.6 | 23.4 | 0.0 | 0.0 | 532.8 | 541.9 | . | . |
| Sweden | 155 | 149 | 79.2 | 20.8 | 2.0 | 0.5 | 501.5 | 481.7 | 478.5 | 487.1 |
| International Avg. | 133 | 129 | 63.3 | 36.7 | 0.9 | 2.2 | 506.2 | 495.4 | 550.2 | 427.3 |

Question : Do the students in the TIMSS class use other computing technology during physics lessons?
 Location : TQP3-26AC (PT2PSUOT)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 51 | 13.0 | 87.0 | 0.0 | 14.9 | 494.2 | 499.9 | . | 467.7 |
| Iran, Islamic Rep. of | 155 | 154 | 10.8 | 89.2 | 0.0 | 1.1 | 463.4 | 458.3 | . | 550.4 |
| Italy | 115 | 114 | 9.3 | 90.7 | 0.0 | 1.1 | 451.5 | 421.1 | . | 270.8 |
| Lebanon | 239 | 222 | 13.4 | 86.6 | 0.0 | 6.8 | 459.8 | 441.9 | . | 432.8 |
| Netherlands | 119 | 111 | 14.1 | 85.9 | 5.8 | 0.7 | 583.6 | 583.1 | 576.0 | 548.8 |
| Norway | 129 | 127 | 32.1 | 67.9 | 0.4 | 0.7 | 534.5 | 533.8 | 595.9 | 515.0 |
| Russian Federation | 158 | 156 | 5.1 | 94.9 | 0.0 | 0.7 | 547.4 | 520.2 | . | 475.2 |
| Slovenia | 66 | 66 | 34.5 | 65.5 | 0.0 | 0.0 | 541.1 | 531.7 | . | . |
| Sweden | 155 | . | . | . | 100.0 | 0.0 | . | . | 496.9 | . |
| International Avg. | 133 | 125 | 16.5 | 83.5 | 11.8 | 2.9 | 509.4 | 498.7 | 556.3 | 465.8 |

Question : If the students use calculators, what kind of calculators do most of them use?
Location : TQP3-26B (PT2PKCAL)

| Country | Sample | Valid N | 1.SIMPL E CALC % | 2.SCIEN TIFIC CALC % | 3.GRAPH ING CALC % | 4.SYMBO LIC CALC % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.SIMPL E CALC Mean | 2.SCIEN TIFIC CALC Mean | 3.GRAPH ING CALC Mean | 4.SYMBO LIC CALC Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|------------------------|-------------------------------|-----------------------------|-----------------------------|------------------------------|----------------------------|--------------|---------------------------|----------------------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 50 | 73.6 | 24.1 | . | . | 0.0 | 2.3 | 21.1 | 501.6 | 516.8 | . | . | . | 422.9 | 460.8 |
| Iran, Islamic Rep. of | 155 | 152 | 36.2 | 50.3 | . | . | 0.0 | 13.4 | 1.0 | 453.3 | 462.7 | . | . | . | 464.7 | 491.5 |
| Italy | 115 | 114 | 1.0 | 97.0 | 2.0 | . | 0.0 | . | 1.1 | 337.1 | 424.6 | 436.3 | . | . | . | 270.8 |
| Lebanon | 239 | 219 | 8.2 | 83.9 | 7.5 | 0.4 | 3.2 | . | 3.4 | 433.9 | 442.0 | 459.6 | 419.0 | 438.6 | . | 473.4 |
| Netherlands | 119 | 111 | . | 1.8 | 90.2 | 8.0 | 5.8 | . | 0.7 | . | 580.7 | 584.2 | 571.7 | 576.0 | . | 548.8 |
| Norway | 129 | 128 | . | . | 91.4 | 7.8 | 0.4 | 0.8 | 0.0 | . | . | 533.7 | 534.5 | 595.9 | 552.1 | . |
| Russian Federation | 158 | 158 | 36.2 | 63.8 | . | . | 0.0 | . | 0.0 | 491.6 | 538.0 | . | . | . | . | . |
| Slovenia | 66 | 66 | 6.2 | 93.8 | . | . | 0.0 | . | 0.0 | 562.1 | 533.2 | . | . | . | . | . |
| Sweden | 155 | 149 | . | 5.0 | 93.0 | 2.1 | 2.0 | . | 0.5 | . | 506.7 | 496.9 | 497.7 | 478.5 | . | 487.1 |
| International Avg. | 133 | 127 | 26.9 | 52.5 | 56.8 | 4.6 | 1.3 | 5.5 | 3.1 | 463.3 | 500.6 | 502.1 | 505.7 | 522.3 | 479.9 | 455.4 |

Question : If the students use computers, do any of the computers have access to the Internet?
 Location : TQP3-26C (PT2PCOAI)

| Country | Sample | Valid N | 1.YES % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.YES Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|------------|------------------------------|----------------------------|--------------|---------------|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 47 | 43.2 | 0.0 | 56.8 | 18.0 | 520.4 | . | 482.2 | 475.0 |
| Iran, Islamic Rep. of | 155 | 151 | 17.2 | 0.0 | 82.8 | 4.0 | 503.5 | . | 454.8 | 380.7 |
| Italy | 115 | 112 | 77.4 | 0.0 | 22.6 | 2.5 | 428.4 | . | 408.1 | 358.7 |
| Lebanon | 239 | 222 | 24.8 | 0.0 | 75.2 | 6.7 | 458.3 | . | 440.0 | 429.3 |
| Netherlands | 119 | 105 | 87.0 | 5.8 | 13.0 | 5.7 | 583.5 | 576.0 | 588.3 | 563.3 |
| Norway | 129 | 126 | 80.0 | 0.4 | 20.0 | 1.6 | 532.0 | 595.9 | 546.3 | 474.0 |
| Russian Federation | 158 | 136 | 70.8 | 0.0 | 29.2 | 13.5 | 523.8 | . | 515.2 | 521.1 |
| Slovenia | 66 | 53 | 71.3 | 0.0 | 28.7 | 18.5 | 536.5 | . | 541.9 | 521.3 |
| Sweden | 155 | 145 | 78.6 | 2.0 | 21.4 | 3.2 | 502.1 | 478.5 | 481.7 | 485.3 |
| International Avg. | 133 | 122 | 61.1 | 0.9 | 38.9 | 8.2 | 509.8 | 550.2 | 495.4 | 467.6 |

Question : How often do students in the TIMSS class use calculators or computers in their physics lessons for scientific procedures?
 Location : TQP3-27A (PT2PCASP)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 50 | 4.7 | 2.8 | 31.0 | 61.6 | 0.0 | 18.4 | 664.3 | 526.8 | 497.1 | 480.2 | . | 490.2 |
| Iran, Islamic Rep. of | 155 | 147 | 11.7 | 14.4 | 43.8 | 30.1 | 0.0 | 5.3 | 455.9 | 434.6 | 479.5 | 449.0 | . | 438.1 |
| Italy | 115 | 114 | 7.5 | 12.8 | 54.4 | 25.3 | 0.0 | 1.1 | 433.4 | 412.5 | 423.2 | 428.5 | . | 270.8 |
| Lebanon | 239 | 191 | 16.6 | 7.9 | 41.1 | 34.4 | 0.0 | 20.1 | 446.2 | 437.2 | 449.1 | 438.3 | . | 441.7 |
| Netherlands | 119 | 111 | 21.5 | 9.8 | 65.1 | 3.6 | 5.8 | 0.7 | 583.0 | 572.4 | 584.9 | 582.0 | 576.0 | 548.8 |
| Norway | 129 | 126 | 15.5 | 9.2 | 65.6 | 9.8 | 0.4 | 1.8 | 523.1 | 519.5 | 535.8 | 555.0 | 595.9 | 515.2 |
| Russian Federation | 158 | 157 | 36.8 | 8.8 | 47.2 | 7.3 | 0.0 | 0.3 | 532.6 | 520.3 | 512.7 | 523.8 | . | 449.2 |
| Slovenia | 66 | 62 | 10.6 | 26.1 | 60.9 | 2.4 | 0.0 | 5.6 | 539.2 | 523.0 | 542.5 | 495.0 | . | 519.3 |
| Sweden | 155 | 148 | 46.0 | 18.8 | 34.2 | 1.0 | 2.0 | 1.8 | 502.1 | 486.8 | 494.5 | 496.9 | 478.5 | 538.0 |
| International Avg. | 133 | 123 | 19.0 | 12.3 | 49.2 | 19.5 | 0.9 | 6.1 | 520.0 | 492.6 | 502.1 | 494.3 | 550.2 | 467.9 |

Question : How often do students in the TIMSS class use calculators or computers in their physics lessons for modeling and simulations?
 Location : TQP3-27B (PT2PCAMS)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 46 | 8.4 | 8.0 | 12.5 | 71.1 | 0.0 | 23.9 | 541.0 | 613.3 | 470.2 | 483.5 | . | 485.9 |
| Iran, Islamic Rep. of | 155 | 139 | 0.6 | 3.8 | 21.9 | 73.7 | 0.0 | 9.9 | 280.5 | 479.0 | 495.0 | 451.9 | . | 446.1 |
| Italy | 115 | 114 | 0.6 | 6.3 | 32.0 | 61.1 | 0.0 | 1.1 | 523.8 | 449.5 | 428.0 | 418.2 | . | 270.8 |
| Lebanon | 239 | 185 | 4.2 | 7.7 | 32.6 | 55.5 | 0.0 | 22.8 | 418.7 | 454.6 | 446.6 | 443.5 | . | 440.8 |
| Netherlands | 119 | 111 | 18.3 | 2.7 | 71.6 | 7.5 | 5.8 | 0.7 | 580.1 | 596.9 | 583.7 | 580.2 | 576.0 | 548.8 |
| Norway | 129 | 126 | 5.3 | 8.3 | 64.7 | 21.7 | 0.4 | 1.8 | 525.8 | 540.5 | 532.6 | 538.7 | 595.9 | 515.2 |
| Russian Federation | 158 | 156 | 8.7 | 10.2 | 52.8 | 28.3 | 0.0 | 1.2 | 499.7 | 500.9 | 531.9 | 514.0 | . | 552.0 |
| Slovenia | 66 | 61 | 3.6 | 14.8 | 59.0 | 22.6 | 0.0 | 6.4 | 580.6 | 523.3 | 539.6 | 525.3 | . | 528.2 |
| Sweden | 155 | 146 | 6.1 | 4.2 | 58.2 | 31.4 | 2.0 | 3.0 | 488.8 | 490.6 | 502.0 | 490.9 | 478.5 | 501.0 |
| International Avg. | 133 | 120 | 6.2 | 7.3 | 45.0 | 41.4 | 0.9 | 7.9 | 493.2 | 516.5 | 503.3 | 494.0 | 550.2 | 476.6 |

Question : How often do students in the TIMSS class use calculators or computers in their physics lessons for solving equations?
 Location : TQP3-27C (PT2PCASE)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 45 | 7.2 | 10.1 | 26.6 | 56.1 | 0.0 | 26.1 | 548.6 | 569.6 | 478.1 | 486.3 | . | 487.2 |
| Iran, Islamic Rep. of | 155 | 151 | 18.9 | 18.2 | 27.6 | 35.3 | 0.0 | 2.5 | 466.3 | 437.8 | 472.0 | 459.2 | . | 447.5 |
| Italy | 115 | 114 | 22.1 | 17.5 | 27.6 | 32.8 | 0.0 | 1.1 | 417.7 | 448.4 | 422.8 | 416.0 | . | 270.8 |
| Lebanon | 239 | 198 | 37.9 | 11.9 | 25.3 | 24.9 | 0.0 | 17.3 | 447.4 | 428.4 | 438.6 | 447.2 | . | 446.6 |
| Netherlands | 119 | 111 | 33.6 | 15.9 | 38.6 | 11.9 | 5.8 | 0.7 | 580.8 | 594.4 | 581.5 | 580.1 | 576.0 | 548.8 |
| Norway | 129 | 125 | 44.7 | 19.1 | 20.0 | 16.3 | 1.0 | 1.8 | 535.1 | 538.5 | 529.6 | 532.7 | 554.0 | 515.2 |
| Russian Federation | 158 | 156 | 44.3 | 20.3 | 19.8 | 15.6 | 0.1 | 0.8 | 520.3 | 505.8 | 530.6 | 527.7 | 576.8 | 594.0 |
| Slovenia | 66 | 61 | 43.6 | 12.2 | 21.3 | 22.9 | 0.0 | 6.4 | 544.5 | 543.7 | 511.4 | 536.1 | . | 528.2 |
| Sweden | 155 | 149 | 33.3 | 13.3 | 36.4 | 17.0 | 2.0 | 0.5 | 497.1 | 505.0 | 496.4 | 493.9 | 478.5 | 487.1 |
| International Avg. | 133 | 123 | 31.7 | 15.4 | 27.0 | 25.9 | 1.0 | 6.3 | 506.4 | 508.0 | 495.7 | 497.7 | 546.3 | 480.6 |

Question : How often do students in the TIMSS class use calculators or computers in their physics lessons for processing and analyzing data?
 Location : TQP3-27D (PT2PCAAD)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|--------------|-------------------------------|--------------|--|---|---------------------------|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 45 | 7.2 | 5.7 | 27.3 | 59.9 | 0.0 | 26.1 | 548.6 | 505.8 | 505.4 | 486.1 | . | 487.2 |
| Iran, Islamic Rep. of | 155 | 143 | 2.8 | 12.2 | 34.4 | 50.6 | 0.0 | 8.1 | 434.9 | 445.9 | 472.7 | 457.4 | . | 451.0 |
| Italy | 115 | 114 | 19.9 | 20.7 | 43.2 | 16.1 | 0.0 | 1.1 | 432.1 | 418.5 | 423.6 | 421.6 | . | 270.8 |
| Lebanon | 239 | 196 | 25.1 | 8.0 | 24.7 | 42.2 | 0.0 | 17.8 | 441.4 | 446.4 | 449.7 | 439.5 | . | 445.7 |
| Netherlands | 119 | 111 | 18.9 | 15.4 | 54.0 | 11.7 | 5.8 | 0.7 | 574.9 | 578.9 | 584.8 | 594.5 | 576.0 | 548.8 |
| Norway | 129 | 126 | 9.6 | 22.0 | 58.9 | 9.6 | 0.4 | 1.8 | 539.0 | 528.6 | 531.3 | 560.0 | 595.9 | 515.2 |
| Russian Federation | 158 | 158 | 49.9 | 18.8 | 27.8 | 3.5 | 0.0 | 0.0 | 532.4 | 525.9 | 501.5 | 493.5 | . | . |
| Slovenia | 66 | 61 | 15.8 | 6.5 | 67.3 | 10.4 | 0.0 | 6.4 | 546.7 | 546.2 | 532.8 | 528.7 | . | 528.2 |
| Sweden | 155 | 148 | 15.8 | 16.6 | 65.4 | 2.2 | 2.0 | 1.1 | 508.1 | 504.2 | 495.1 | 432.5 | 478.5 | 498.4 |
| International Avg. | 133 | 122 | 18.3 | 14.0 | 44.8 | 22.9 | 0.9 | 7.0 | 506.4 | 500.1 | 499.7 | 490.4 | 550.2 | 468.2 |

Question : Do you assign physics homework to the TIMSS class?
 Location : TQP3-28 (PT2PHMWP)

| Country | Sample | Valid N | 1.YES % | 2.NO % | Not Adminis- tered % | Omitted % | 1.YES Mean | 2.NO Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|------------|-----------|-------------------------------|--------------|---------------|--------------|----------------------------------|-----------------|
| Armenia | 58 | 50 | 100.0 | . | 0.0 | 18.4 | 495.4 | . | . | 490.2 |
| Iran, Islamic Rep. of | 155 | 155 | 94.6 | 5.4 | 0.0 | 0.0 | 460.6 | 447.3 | . | . |
| Italy | 115 | 114 | 96.3 | 3.7 | 0.0 | 1.1 | 422.6 | 458.9 | . | 270.8 |
| Lebanon | 239 | 233 | 97.4 | 2.6 | 0.0 | 2.2 | 443.4 | 438.0 | . | 456.1 |
| Netherlands | 119 | 110 | 81.3 | 18.7 | 5.8 | 1.3 | 585.5 | 572.1 | 576.0 | 577.8 |
| Norway | 129 | 128 | 96.5 | 3.5 | 0.4 | 0.0 | 534.0 | 530.2 | 595.9 | . |
| Russian Federation | 158 | 158 | 99.6 | 0.4 | 0.0 | 0.0 | 521.0 | 596.3 | . | . |
| Slovenia | 66 | 65 | 93.6 | 6.4 | 0.0 | 0.8 | 534.0 | 541.6 | . | 593.7 |
| Sweden | 155 | 149 | 73.2 | 26.8 | 2.0 | 0.5 | 499.0 | 492.8 | 478.5 | 487.1 |
| International Avg. | 133 | 129 | 92.5 | 8.4 | 0.9 | 2.7 | 499.5 | 509.7 | 550.2 | 479.3 |

Question : How often do you usually assign physics homework?
 Location : TQP3-29 (PT2PHOAP)

| Country | Sample | Valid N | 1.EVERY OR ALMOST EVERY LESSON % | 2.ABOUT HALF THE LESSONS % | 3.SOME LESSONS % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.EVERY OR ALMOST EVERY LESSON Mean | 2.ABOUT HALF THE LESSONS Mean | 3.SOME LESSONS Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|---|--|------------------------|------------------------------|----------------------------|--------------|--|---|---------------------------|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 48 | 70.5 | 20.7 | 8.8 | 0.0 | . | 20.4 | 507.5 | 482.7 | 429.3 | . | . | 490.4 |
| Iran, Islamic Rep. of | 155 | 155 | 70.6 | 13.9 | 10.1 | 0.0 | 5.4 | 0.0 | 460.0 | 449.1 | 480.2 | . | 447.3 | . |
| Italy | 115 | 114 | 67.9 | 16.9 | 11.4 | 0.0 | 3.7 | 1.1 | 433.2 | 408.6 | 380.1 | . | 458.9 | 270.8 |
| Lebanon | 239 | 231 | 82.1 | 11.5 | 3.8 | 0.6 | 2.6 | 2.5 | 444.3 | 441.0 | 432.5 | 429.6 | 438.0 | 456.2 |
| Netherlands | 119 | 109 | 67.8 | 8.6 | 4.9 | 5.8 | 18.7 | 1.4 | 587.3 | 577.6 | 574.6 | 576.0 | 572.1 | 578.2 |
| Norway | 129 | 128 | 72.1 | 15.4 | 9.0 | 0.4 | 3.5 | 0.0 | 534.5 | 530.1 | 536.7 | 595.9 | 530.2 | . |
| Russian Federation | 158 | 158 | 95.4 | 2.6 | 1.6 | 0.0 | 0.4 | 0.0 | 521.5 | 498.3 | 528.8 | . | 596.3 | . |
| Slovenia | 66 | 65 | 36.3 | 31.7 | 25.7 | 0.0 | 6.4 | 0.8 | 531.4 | 543.8 | 525.7 | . | 541.6 | 593.7 |
| Sweden | 155 | 146 | 22.8 | 18.3 | 31.8 | 2.0 | 27.1 | 2.6 | 508.4 | 498.5 | 490.7 | 478.5 | 493.3 | 514.3 |
| International Avg. | 133 | 128 | 65.0 | 15.5 | 11.9 | 1.0 | 8.5 | 3.2 | 503.1 | 492.2 | 486.5 | 520.0 | 509.7 | 483.9 |

Question : When you assign physics homework to the TIMSS class, about how many minutes do you usually assign?
Location : TQP3-30 (PT2PHWKM)

| Country | Sample | Valid N | 1.30 | 2.31-60 | 3.61-90 | 4.MORE | Not | Not | Omitted | 1.30 | 2.31-60 | 3.61-90 | 4.MORE | Not | Not | Omitted |
|-----------------------|--------|---------|-------------------------|--------------|--------------|----------------------------|-----------------------|---------------------|---------|----------------------------|-----------------|-----------------|-------------------------------|--------------------------|------------------------|---------|
| | | | MINUTES OR LESS % | MINUTES % | MINUTES % | THAN 90 MINUTES % | Adminis tered % | Applica ble % | | MINUTES OR LESS Mean | MINUTES Mean | MINUTES Mean | THAN 90 MINUTES Mean | Adminis tered Mean | Applica ble Mean | |
| Armenia | 58 | 45 | 20.8 | 57.5 | 14.8 | 6.9 | 0.0 | . | 25.5 | 482.5 | 496.3 | 523.0 | 480.4 | . | . | 489.1 |
| Iran, Islamic Rep. of | 155 | 154 | 18.5 | 34.4 | 24.9 | 16.8 | 0.0 | 5.4 | 0.8 | 444.1 | 459.7 | 453.5 | 483.9 | . | 447.3 | 606.0 |
| Italy | 115 | 114 | 22.1 | 64.5 | 7.9 | 1.7 | 0.0 | 3.7 | 1.1 | 405.5 | 430.0 | 425.8 | 349.0 | . | 458.9 | 270.8 |
| Lebanon | 239 | 230 | 7.7 | 53.0 | 31.7 | 5.0 | 0.0 | 2.6 | 3.4 | 440.1 | 443.2 | 448.4 | 403.3 | . | 438.0 | 471.5 |
| Netherlands | 119 | 110 | 31.4 | 44.3 | 4.7 | 0.9 | 5.8 | 18.7 | 1.3 | 590.1 | 583.8 | 578.0 | 544.9 | 576.0 | 572.1 | 577.8 |
| Norway | 129 | 127 | 14.6 | 66.3 | 9.8 | 5.7 | 0.4 | 3.5 | 0.8 | 546.9 | 531.6 | 530.6 | 532.8 | 595.9 | 530.2 | 550.4 |
| Russian Federation | 158 | 158 | 15.3 | 62.9 | 21.1 | 0.4 | 0.0 | 0.4 | 0.0 | 443.5 | 530.8 | 547.6 | 528.5 | . | 596.3 | . |
| Slovenia | 66 | 65 | 67.6 | 24.7 | 1.3 | . | 0.0 | 6.4 | 0.8 | 524.9 | 556.2 | 590.5 | . | . | 541.6 | 593.7 |
| Sweden | 155 | 145 | 9.3 | 53.2 | 8.6 | 1.7 | 2.0 | 27.1 | 2.7 | 491.3 | 501.2 | 500.5 | 429.4 | 478.5 | 493.3 | 514.9 |
| International Avg. | 133 | 128 | 23.0 | 51.2 | 13.9 | 4.9 | 0.9 | 8.5 | 4.0 | 485.4 | 503.7 | 510.9 | 469.0 | 550.2 | 509.7 | 509.3 |

Question : How often do you assign homework that includes doing problem/question sets to the TIMSS class?
 Location : TQP3-31A (PT2PKPHS)

| Country | Sample | Valid N | 1.ALWAY | 2.SOMET | 3.NEVER | Not | Not | Omitted | 1.ALWAY | 2.SOMET | 3.NEVER | Not | Not | Omitted |
|-----------------------|--------|---------|-------------------------------|---------|----------------------------|-----|------|---------|----------------------------------|---------|-------------------------------|-------|-------|---------|
| | | | S OR ALMOST ALWAYS % | | OR ALMOST NEVER % | | | | S OR ALMOST ALWAYS Mean | | OR ALMOST NEVER Mean | | | |
| Armenia | 58 | 50 | 86.1 | 13.9 | . | 0.0 | . | 18.4 | 498.4 | 476.8 | . | . | . | 490.2 |
| Iran, Islamic Rep. of | 155 | 153 | 68.2 | 26.3 | . | 0.0 | 5.4 | 1.0 | 456.9 | 466.9 | . | . | 447.3 | 542.3 |
| Italy | 115 | 114 | 72.9 | 22.5 | 0.9 | 0.0 | 3.7 | 1.1 | 431.8 | 391.6 | 449.8 | . | 458.9 | 270.8 |
| Lebanon | 239 | 221 | 81.1 | 16.2 | . | 0.0 | 2.8 | 8.1 | 445.8 | 432.0 | . | . | 438.0 | 444.8 |
| Netherlands | 119 | 110 | 76.9 | 4.5 | . | 5.8 | 18.7 | 1.3 | 586.6 | 565.3 | . | 576.0 | 572.1 | 577.8 |
| Norway | 129 | 128 | 79.4 | 17.1 | . | 0.4 | 3.5 | 0.0 | 534.0 | 534.1 | . | 595.9 | 530.2 | . |
| Russian Federation | 158 | 156 | 93.6 | 6.1 | . | 0.0 | 0.4 | 0.9 | 521.6 | 509.6 | . | . | 596.3 | 536.5 |
| Slovenia | 66 | 65 | 88.8 | 4.8 | . | 0.0 | 6.4 | 0.8 | 535.2 | 511.3 | . | . | 541.6 | 593.7 |
| Sweden | 155 | 148 | 53.3 | 19.8 | 0.3 | 2.0 | 26.5 | 0.5 | 497.9 | 501.9 | 451.1 | 478.5 | 493.3 | 491.0 |
| International Avg. | 133 | 127 | 77.8 | 14.6 | 0.6 | 0.9 | 8.4 | 3.6 | 500.9 | 487.7 | 450.4 | 550.2 | 509.7 | 493.4 |

Question : How often do you assign homework that includes reading the textbook to the TIMSS class?
 Location : TQP3-31B (PT2PKPHR)

| Country | Sample | Valid N | 1.ALWAY | | 3.NEVER | | | | | 1.ALWAY | | 3.NEVER | | | |
|-----------------------|--------|---------|-------------------------------|----------------------|----------------------------|------------------------------|----------------------------|--------------|-------|----------------------------------|-------------------------|-------------------------------|---------------------------------|-------------------------------|-----------------|
| | | | S OR ALMOST ALWAYS % | 2.SOMET IMES % | OR ALMOST NEVER % | Not Adminis tered % | Not Applica ble % | Omitted % | | S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | OR ALMOST NEVER Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
| Armenia | 58 | 47 | 78.1 | 21.9 | . | 0.0 | . | 24.7 | 507.4 | 464.5 | . | . | . | . | 483.6 |
| Iran, Islamic Rep. of | 155 | 151 | 62.5 | 30.6 | 1.4 | 0.0 | 5.5 | 2.0 | 452.5 | 470.3 | 555.1 | . | . | 447.3 | 498.3 |
| Italy | 115 | 114 | 68.6 | 24.8 | 2.9 | 0.0 | 3.7 | 1.1 | 420.8 | 425.8 | 435.4 | . | . | 458.9 | 270.8 |
| Lebanon | 239 | 218 | 40.7 | 49.4 | 7.0 | 0.0 | 2.8 | 9.0 | 439.8 | 444.7 | 460.9 | . | . | 438.0 | 442.2 |
| Netherlands | 119 | 109 | 41.0 | 31.4 | 8.8 | 5.8 | 18.8 | 1.9 | 589.3 | 581.0 | 581.3 | 576.0 | 572.1 | 590.3 | |
| Norway | 129 | 128 | 40.1 | 36.8 | 19.6 | 0.4 | 3.5 | 0.0 | 532.5 | 523.0 | 557.6 | 595.9 | 530.2 | . | |
| Russian Federation | 158 | 155 | 75.5 | 23.6 | 0.6 | 0.0 | 0.4 | 1.3 | 519.7 | 521.3 | 555.7 | . | . | 596.3 | 570.9 |
| Slovenia | 66 | 65 | 1.6 | 51.2 | 40.7 | 0.0 | 6.4 | 0.8 | 582.5 | 529.2 | 538.2 | . | . | 541.6 | 593.7 |
| Sweden | 155 | 146 | 38.6 | 27.3 | 7.0 | 2.0 | 27.1 | 2.4 | 493.8 | 493.5 | 537.1 | 478.5 | 493.3 | 524.9 | |
| International Avg. | 133 | 126 | 49.6 | 33.0 | 11.0 | 0.9 | 8.5 | 4.8 | 504.3 | 494.8 | 527.7 | 550.2 | 509.7 | 496.8 | |

Question : How often do you assign homework that includes memorizing formulas and procedures to the TIMSS class?
Location : TQP3-31C (PT2PKPHM)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS % | 2.SOMET IMES % | 3.NEVER OR ALMOST NEVER % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.ALWAY S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | 3.NEVER OR ALMOST NEVER Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|--|----------------------|---------------------------------------|------------------------------|----------------------------|--------------|---|-------------------------|--|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 48 | 80.6 | 19.4 | . | 0.0 | . | 20.8 | 493.2 | 505.5 | . | . | . | 490.0 |
| Iran, Islamic Rep. of | 155 | 150 | 33.8 | 43.8 | 16.8 | 0.0 | 5.5 | 2.6 | 435.6 | 477.5 | 470.5 | . | 447.3 | 436.9 |
| Italy | 115 | 114 | 5.4 | 39.8 | 51.1 | 0.0 | 3.7 | 1.1 | 403.4 | 416.7 | 429.2 | . | 458.9 | 270.8 |
| Lebanon | 239 | 218 | 43.8 | 41.9 | 11.5 | 0.0 | 2.8 | 10.2 | 439.7 | 440.9 | 454.0 | . | 438.0 | 458.7 |
| Netherlands | 119 | 109 | 2.6 | 26.7 | 51.8 | 5.8 | 18.8 | 1.9 | 606.3 | 583.9 | 584.8 | 576.0 | 572.1 | 590.3 |
| Norway | 129 | 128 | 3.2 | 41.0 | 52.3 | 0.4 | 3.5 | 0.0 | 555.6 | 537.5 | 530.0 | 595.9 | 530.2 | . |
| Russian Federation | 158 | 154 | 56.9 | 39.9 | 2.9 | 0.0 | 0.4 | 2.0 | 518.4 | 521.5 | 578.3 | . | 596.3 | 504.5 |
| Slovenia | 66 | 65 | 1.6 | 8.4 | 83.5 | 0.0 | 6.4 | 0.8 | 582.5 | 531.0 | 533.4 | . | 541.6 | 593.7 |
| Sweden | 155 | 146 | 0.2 | 16.6 | 56.1 | 2.0 | 27.1 | 2.4 | 568.2 | 484.5 | 501.5 | 478.5 | 493.3 | 524.9 |
| International Avg. | 133 | 126 | 25.4 | 30.8 | 40.7 | 0.9 | 8.5 | 4.6 | 511.4 | 499.9 | 510.2 | 550.2 | 509.7 | 483.7 |

Question : How often do you assign homework that includes gathering, analyzing and reporting data to the TIMSS class?
 Location : TQP3-31D (PT2PKPHG)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted |
|-----------------------|--------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|
| | | | % | % | % | % | % | | Mean | Mean | Mean | Mean | Mean | |
| Armenia | 58 | 45 | 35.6 | 60.9 | 3.5 | 0.0 | . | 28.8 | 496.6 | 491.2 | 588.7 | . | . | 489.3 |
| Iran, Islamic Rep. of | 155 | 150 | 20.6 | 59.9 | 14.0 | 0.0 | 5.6 | 3.4 | 448.1 | 456.7 | 498.8 | . | 447.3 | 447.6 |
| Italy | 115 | 114 | 5.4 | 58.6 | 32.3 | 0.0 | 3.7 | 1.1 | 389.8 | 431.4 | 411.9 | . | 458.9 | 270.8 |
| Lebanon | 239 | 218 | 25.4 | 60.1 | 11.8 | 0.0 | 2.8 | 9.5 | 441.9 | 443.6 | 444.2 | . | 438.0 | 447.7 |
| Netherlands | 119 | 110 | 1.2 | 40.3 | 39.8 | 5.8 | 18.7 | 1.3 | 600.4 | 587.2 | 583.3 | 576.0 | 572.1 | 577.8 |
| Norway | 129 | 128 | 0.9 | 41.4 | 54.2 | 0.4 | 3.5 | 0.0 | 497.0 | 535.2 | 533.7 | 595.9 | 530.2 | . |
| Russian Federation | 158 | 154 | 12.2 | 80.8 | 6.7 | 0.0 | 0.4 | 2.1 | 517.4 | 522.6 | 511.9 | . | 596.3 | 507.5 |
| Slovenia | 66 | 65 | 3.7 | 63.3 | 26.6 | 0.0 | 6.4 | 0.8 | 591.3 | 532.2 | 530.3 | . | 541.6 | 593.7 |
| Sweden | 155 | 144 | . | 27.2 | 45.2 | 2.0 | 27.7 | 4.5 | . | 500.1 | 496.7 | 478.5 | 493.3 | 510.7 |
| International Avg. | 133 | 125 | 13.1 | 54.7 | 26.0 | 0.9 | 8.6 | 5.7 | 497.8 | 500.0 | 511.1 | 550.2 | 509.7 | 480.6 |

Question : How often do you assign homework that includes finding one or more applications of the content covered to the TIMSS class?
 Location : TQP3-31E (PT2PKPHF)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS % | 2.SOMET IMES % | 3.NEVER OR ALMOST NEVER % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.ALWAY S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | 3.NEVER OR ALMOST NEVER Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|--|----------------------|---------------------------------------|------------------------------|----------------------------|--------------|---|-------------------------|--|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 48 | 46.8 | 43.5 | 9.6 | 0.0 | . | 20.8 | 501.1 | 502.3 | 438.9 | . | . | 490.0 |
| Iran, Islamic Rep. of | 155 | 149 | 11.7 | 62.3 | 20.4 | 0.0 | 5.6 | 3.8 | 480.4 | 451.2 | 482.3 | . | 447.3 | 437.8 |
| Italy | 115 | 114 | 11.9 | 56.3 | 28.1 | 0.0 | 3.7 | 1.1 | 437.5 | 424.3 | 412.8 | . | 458.9 | 270.8 |
| Lebanon | 239 | 216 | 17.2 | 64.5 | 15.5 | 0.0 | 2.8 | 9.6 | 443.3 | 443.8 | 440.6 | . | 438.0 | 448.1 |
| Netherlands | 119 | 109 | . | 18.6 | 62.6 | 5.8 | 18.8 | 1.9 | . | 585.9 | 585.0 | 576.0 | 572.1 | 590.3 |
| Norway | 129 | 128 | . | 27.8 | 68.7 | 0.4 | 3.5 | 0.0 | . | 527.2 | 536.7 | 595.9 | 530.2 | . |
| Russian Federation | 158 | 155 | 26.8 | 68.9 | 3.9 | 0.0 | 0.4 | 1.8 | 529.4 | 523.7 | 417.7 | . | 596.3 | 518.8 |
| Slovenia | 66 | 64 | 1.6 | 50.0 | 42.0 | 0.0 | 6.4 | 1.1 | 582.5 | 534.8 | 531.1 | . | 541.6 | 582.3 |
| Sweden | 155 | 146 | . | 27.4 | 45.6 | 2.0 | 27.1 | 2.4 | . | 501.1 | 495.9 | 478.5 | 493.3 | 524.9 |
| International Avg. | 133 | 125 | 19.3 | 46.6 | 32.9 | 0.9 | 8.5 | 4.7 | 495.7 | 499.4 | 482.3 | 550.2 | 509.7 | 482.9 |

Question : How often do you assign homework that includes working on projects to the TIMSS class?
 Location : TQP3-31F (PT2PKPHP)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS % | 2.SOMET IMES % | 3.NEVER OR ALMOST NEVER % | Not Adminis tered % | Not Applica ble % | Omitted % | 1.ALWAY S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | 3.NEVER OR ALMOST NEVER Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
|-----------------------|--------|---------|--|----------------------|---------------------------------------|------------------------------|----------------------------|--------------|---|-------------------------|--|---------------------------------|-------------------------------|-----------------|
| Armenia | 58 | 45 | 12.9 | 54.1 | 33.0 | 0.0 | . | 28.6 | 523.9 | 500.4 | 487.7 | . | . | 482.5 |
| Iran, Islamic Rep. of | 155 | 149 | 3.3 | 43.3 | 47.8 | 0.0 | 5.6 | 3.9 | 406.1 | 466.4 | 457.8 | . | 447.3 | 474.4 |
| Italy | 115 | 114 | 1.0 | 28.7 | 66.5 | 0.0 | 3.7 | 1.1 | 337.1 | 421.1 | 424.5 | . | 458.9 | 270.8 |
| Lebanon | 239 | 219 | 4.8 | 49.5 | 42.9 | 0.0 | 2.8 | 8.9 | 429.9 | 447.4 | 439.5 | . | 438.0 | 449.6 |
| Netherlands | 119 | 110 | 2.9 | 32.3 | 46.1 | 5.8 | 18.7 | 1.3 | 587.1 | 578.0 | 590.6 | 576.0 | 572.1 | 577.8 |
| Norway | 129 | 127 | . | 25.9 | 70.6 | 0.4 | 3.5 | 0.6 | . | 534.7 | 534.2 | 595.9 | 530.2 | 479.3 |
| Russian Federation | 158 | 156 | 2.3 | 68.0 | 29.3 | 0.0 | 0.4 | 0.9 | 542.6 | 532.4 | 492.1 | . | 596.3 | 536.5 |
| Slovenia | 66 | 65 | 1.6 | 36.4 | 55.5 | 0.0 | 6.4 | 0.8 | 582.5 | 522.4 | 540.2 | . | 541.6 | 593.7 |
| Sweden | 155 | 146 | 0.3 | 24.0 | 48.6 | 2.0 | 27.1 | 2.4 | 533.4 | 483.4 | 504.8 | 478.5 | 493.3 | 524.9 |
| International Avg. | 133 | 126 | 3.7 | 40.3 | 48.9 | 0.9 | 8.5 | 5.4 | 492.8 | 498.5 | 496.8 | 550.2 | 509.7 | 487.7 |

Question : How much emphasis do you place on classroom tests to monitor students' progress in physics?
 Location : TQP3-32A (PT2PEPCT)

| Country | Sample | Valid N | 1.MAJOR | 2.SOME | 3.LITTLE | 4.NO | Not | Omitted | 1.MAJOR | 2.SOME | 3.LITTLE | 4.NO | Not | Omitted |
|-----------------------|--------|---------|----------|----------|----------|----------|--------------|---------|----------|----------|----------|----------|--------------|---------|
| | | | EMPHASIS | EMPHASIS | EMPHASIS | EMPHASIS | Administered | | EMPHASIS | EMPHASIS | EMPHASIS | EMPHASIS | Administered | |
| | | | % | % | % | % | % | % | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 51 | 28.6 | 48.7 | 15.8 | 6.9 | 0.0 | 10.3 | 495.5 | 504.6 | 511.9 | 444.2 | . | 454.8 |
| Iran, Islamic Rep. of | 155 | 150 | 73.8 | 23.5 | 2.6 | . | 0.0 | 3.6 | 457.3 | 471.8 | 435.3 | . | . | 453.0 |
| Italy | 115 | 114 | 62.8 | 37.2 | . | . | 0.0 | 1.1 | 425.4 | 421.4 | . | . | . | 270.8 |
| Lebanon | 239 | 224 | 68.3 | 22.3 | 4.5 | 4.9 | 0.0 | 5.7 | 453.2 | 427.8 | 431.9 | 420.5 | . | 418.6 |
| Netherlands | 119 | 110 | 95.6 | 4.4 | . | . | 5.8 | 1.3 | 582.3 | 597.2 | . | . | 576.0 | 577.8 |
| Norway | 129 | 128 | 95.6 | 4.4 | . | . | 0.4 | 0.0 | 535.2 | 504.1 | . | . | 595.9 | . |
| Russian Federation | 158 | 158 | 87.2 | 11.8 | 1.1 | . | 0.0 | 0.0 | 522.8 | 513.5 | 478.9 | . | . | . |
| Slovenia | 66 | 66 | 70.8 | 26.4 | 2.9 | . | 0.0 | 0.0 | 534.2 | 537.6 | 528.9 | . | . | . |
| Sweden | 155 | 149 | 74.2 | 24.7 | 0.3 | 0.8 | 2.0 | 0.5 | 495.9 | 502.6 | 451.1 | 486.8 | 478.5 | 487.1 |
| International Avg. | 133 | 128 | 73.0 | 22.6 | 4.5 | 4.2 | 0.9 | 2.5 | 500.2 | 497.9 | 473.0 | 450.5 | 550.2 | 443.7 |

Question : How much emphasis do you place on informal assessment to monitor students' progress in physics?
 Location : TQP3-32B (PT2PEPIA)

| | | | 1.MAJOR | | 2.SOME | | 3.LITT | | 4.NO | | Not | | Omitted | | 1.MAJOR | | 2.SOME | | 3.LITT | | 4.NO | | Not | | Omitted | |
|-----------------------|--------|---------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|------|---------|---------|---------|------|---------|---------|
| | | | EMPHASI | EMPHASI | EMPHASI | EMPHASI | Adminis | | EMPHASI | EMPHASI | EMPHASI | EMPHASI | Adminis | | EMPHASI | EMPHASI | EMPHASI | EMPHASI | Adminis | | EMPHASI | EMPHASI | Adminis | | EMPHASI | EMPHASI |
| Country | Sample | Valid N | S | S | S | S | tered | | S | S | S | S | tered | | S | S | S | S | tered | | S | S | tered | | S | S |
| | | | % | % | % | % | % | % | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 48 | 8.5 | 49.8 | 31.7 | 10.0 | 0.0 | 14.3 | 545.0 | 490.1 | 518.6 | 450.3 | . | | 462.5 | | | | | | | | | | | |
| Iran, Islamic Rep. of | 155 | 147 | 8.4 | 58.2 | 24.9 | 8.5 | 0.0 | 5.8 | 431.0 | 466.9 | 451.3 | 466.7 | . | | 458.1 | | | | | | | | | | | |
| Italy | 115 | 114 | 14.4 | 66.8 | 14.5 | 4.3 | 0.0 | 1.1 | 433.5 | 419.1 | 420.1 | 480.4 | . | | 270.8 | | | | | | | | | | | |
| Lebanon | 239 | 218 | 28.6 | 40.3 | 23.5 | 7.5 | 0.0 | 8.1 | 457.5 | 443.2 | 437.9 | 414.3 | . | | 439.8 | | | | | | | | | | | |
| Netherlands | 119 | 109 | 6.6 | 21.1 | 24.1 | 48.2 | 5.8 | 1.9 | 586.1 | 583.7 | 579.1 | 583.9 | 576.0 | | 586.5 | | | | | | | | | | | |
| Norway | 129 | 127 | 7.0 | 53.7 | 37.5 | 1.8 | 0.4 | 1.3 | 537.8 | 528.7 | 540.4 | 559.7 | 595.9 | | 505.8 | | | | | | | | | | | |
| Russian Federation | 158 | 156 | 14.5 | 56.5 | 22.1 | 6.9 | 0.0 | 0.6 | 531.7 | 507.6 | 534.2 | 570.5 | . | | 509.8 | | | | | | | | | | | |
| Slovenia | 66 | 66 | 27.5 | 48.3 | 22.8 | 1.4 | 0.0 | 0.0 | 556.4 | 524.7 | 533.8 | 486.2 | . | | . | | | | | | | | | | | |
| Sweden | 155 | 149 | 15.3 | 70.4 | 11.9 | 2.3 | 2.0 | 0.5 | 501.5 | 501.0 | 473.5 | 484.2 | 478.5 | | 487.1 | | | | | | | | | | | |
| International Avg. | 133 | 126 | 14.5 | 51.7 | 23.7 | 10.1 | 0.9 | 3.7 | 508.9 | 496.1 | 498.8 | 499.6 | 550.2 | | 465.0 | | | | | | | | | | | |

Question : How much emphasis do you place on other tests to monitor students' progress in physics?
 Location : TQP3-32C (PT2PEPOT)

| Country | Sample | Valid N | 1.MAJOR | 2.SOME | 3.LITTLE | 4.NO | Not | Omitted | 1.MAJOR | 2.SOME | 3.LITTLE | 4.NO | Not | Omitted |
|-----------------------|--------|---------|----------|----------|----------|----------|---------|---------|----------|----------|----------|----------|---------|---------|
| | | | EMPHASIS | EMPHASIS | EMPHASIS | EMPHASIS | Adminis | | EMPHASIS | EMPHASIS | EMPHASIS | EMPHASIS | Adminis | |
| | | | S | S | S | S | tered | | Mean | Mean | Mean | Mean | tered | |
| | | | % | % | % | % | % | % | | | | | Mean | Mean |
| Armenia | 58 | 41 | 5.3 | 43.4 | 24.0 | 27.3 | 0.0 | 26.6 | 449.6 | 512.4 | 493.8 | 495.2 | . | 479.4 |
| Iran, Islamic Rep. of | 155 | 147 | 17.9 | 36.2 | 35.8 | 10.1 | 0.0 | 5.5 | 476.8 | 460.8 | 463.5 | 422.0 | . | 445.4 |
| Italy | 115 | 114 | 15.5 | 56.4 | 21.4 | 6.7 | 0.0 | 1.1 | 414.7 | 420.4 | 446.5 | 402.2 | . | 270.8 |
| Lebanon | 239 | 186 | 19.0 | 39.5 | 26.6 | 14.9 | 0.0 | 21.2 | 452.1 | 447.8 | 442.6 | 428.7 | . | 440.2 |
| Netherlands | 119 | . | . | . | . | . | 100.0 | 0.0 | . | . | . | . | 582.5 | . |
| Norway | 129 | . | . | . | . | . | 100.0 | 0.0 | . | . | . | . | 534.1 | . |
| Russian Federation | 158 | 151 | 6.7 | 53.2 | 32.5 | 7.6 | 0.0 | 3.6 | 546.6 | 531.0 | 506.5 | 506.8 | . | 495.1 |
| Slovenia | 66 | 66 | 18.9 | 38.8 | 39.3 | 3.0 | 0.0 | 0.0 | 554.6 | 531.1 | 528.0 | 552.4 | . | . |
| Sweden | 155 | 149 | 53.9 | 28.6 | 7.6 | 9.9 | 2.0 | 0.5 | 499.9 | 499.6 | 501.7 | 474.0 | 478.5 | 487.1 |
| International Avg. | 133 | 122 | 19.6 | 42.3 | 26.7 | 11.4 | 22.4 | 6.5 | 484.9 | 486.2 | 483.2 | 468.8 | 531.7 | 436.3 |

Question : How often does the <TIMSS class> take a physics test or examination for a grade?
 Location : TQP3-33 (PT2PTEEX)

| Country | Sample | Valid N | 1.AT LEAST ONCE A MONTH % | 2.ABOUT EVERY OTHER MONTH % | 3.ABOUT 2 OR 3 TIMES A YEAR % | 4.NEVER % | Not Adminis- tered % | Omitted % | 1.AT LEAST ONCE A MONTH Mean | 2.ABOUT EVERY OTHER MONTH Mean | 3.ABOUT 2 OR 3 TIMES A YEAR Mean | 4.NEVER Mean | Not Adminis- tered Mean | Omitted Mean |
|-----------------------|--------|---------|---------------------------------------|---|---|--------------|-------------------------------|--------------|--|--|--|-----------------|----------------------------------|-----------------|
| Armenia | 58 | 45 | 40.1 | 52.1 | 7.8 | . | 0.0 | 30.3 | 493.0 | 512.9 | 463.3 | . | . | 479.3 |
| Iran, Islamic Rep. of | 155 | 151 | 56.9 | 27.3 | 15.8 | . | 0.0 | 2.5 | 466.3 | 445.3 | 464.7 | . | . | 441.9 |
| Italy | 115 | 112 | 54.1 | 27.4 | 18.5 | . | 0.0 | 2.4 | 423.6 | 442.2 | 393.0 | . | . | 388.4 |
| Lebanon | 239 | 232 | 87.1 | 8.8 | 2.6 | 1.4 | 0.0 | 2.6 | 443.0 | 457.8 | 413.8 | 419.8 | . | 454.6 |
| Netherlands | 119 | 110 | 7.4 | 65.2 | 27.4 | . | 5.8 | 1.3 | 596.6 | 581.4 | 582.9 | . | 576.0 | 577.8 |
| Norway | 129 | 126 | 35.0 | 62.5 | 2.4 | . | 0.4 | 1.6 | 538.4 | 531.3 | 501.2 | . | 595.9 | 580.0 |
| Russian Federation | 158 | 158 | 91.5 | 8.5 | . | . | 0.0 | 0.0 | 521.7 | 516.1 | . | . | . | . |
| Slovenia | 66 | 66 | 10.5 | 59.4 | 30.1 | . | 0.0 | 0.0 | 561.8 | 538.4 | 518.7 | . | . | . |
| Sweden | 155 | 148 | 4.6 | 67.9 | 27.6 | . | 2.0 | 1.0 | 435.3 | 498.1 | 505.6 | . | 478.5 | 498.2 |
| International Avg. | 133 | 128 | 43.0 | 42.1 | 16.5 | 1.4 | 0.9 | 4.6 | 497.8 | 502.6 | 480.4 | 419.8 | 550.2 | 488.6 |

Question : What item formats do you typically use in your physics tests or examinations?
 Location : TQP3-34A (PT2PWFTU)

| Country | Sample | Valid N | 1.ONLY | 2.MOSTL | 3.ABOUT | 4.MOSTL | 5.ONLY | Not | Not | Omitted |
|-----------------------|--------|---------|--------------------------------------|--------------------------------------|--------------------------------------|-------------------------|--------------------|-----------------------|---------------------|---------|
| | | | CONSTRU CTED RESPONS E % | CONSTRU CTED RESPONS E % | CONSTRU CTED RESPONS E % | Y OBJECTI VE % | OBJECTI VE % | Adminis tered % | Applica ble % | |
| Armenia | 58 | 52 | 14.1 | 4.7 | 58.1 | 12.3 | 10.9 | 0.0 | . | 10.2 |
| Iran, Islamic Rep. of | 155 | 152 | 7.9 | 30.6 | 52.2 | 8.3 | 1.0 | 0.0 | . | 1.5 |
| Italy | 115 | 114 | 26.1 | 43.3 | 22.3 | 8.3 | . | 0.0 | . | 1.1 |
| Lebanon | 239 | 183 | 8.1 | 28.6 | 16.4 | 37.5 | 7.6 | 1.8 | 1.8 | 24.5 |
| Netherlands | 119 | 110 | 78.5 | 18.8 | . | 2.7 | . | 5.8 | . | 1.3 |
| Norway | 129 | 125 | 11.4 | 33.7 | 29.7 | 25.2 | . | 0.4 | . | 1.5 |
| Russian Federation | 158 | 156 | 12.8 | 26.6 | 59.5 | 1.0 | . | 1.2 | . | 0.0 |
| Slovenia | 66 | 66 | 9.2 | 21.5 | 66.8 | 2.5 | . | 0.0 | . | 0.0 |
| Sweden | 155 | 148 | 29.4 | 64.0 | 6.6 | . | . | 2.0 | . | 2.9 |
| International Avg. | 133 | 123 | 21.9 | 30.2 | 39.0 | 12.2 | 6.5 | 1.2 | 1.8 | 4.8 |

Question : What item formats do you typically use in your physics tests or examinations?
 Location : TQP3-34A (PT2PWFTU)

| Country | Sample | Valid N | 1.ONLY | 2.MOSTL | 3.ABOUT | 4.MOSTL | 5.ONLY | Not | Not | Omitted |
|-----------------------|--------|---------|---|---|---|-----------------------|-----------------------|--------------------------|------------------------|---------|
| | | | CONSTRU CTED RESPONS E Mean | CONSTRU CTED RESPONS E Mean | CONSTRU CTED RESPONS E Mean | OBJECTI VE Mean | OBJECTI VE Mean | Adminis tered Mean | Applica ble Mean | |
| Armenia | 58 | 52 | 459.9 | 480.5 | 512.4 | 500.5 | 464.1 | . | . | 473.6 |
| Iran, Islamic Rep. of | 155 | 152 | 456.1 | 427.9 | 467.6 | 540.1 | 464.9 | . | . | 413.5 |
| Italy | 115 | 114 | 417.5 | 421.5 | 424.3 | 456.2 | . | . | . | 270.8 |
| Lebanon | 239 | 183 | 472.0 | 444.3 | 440.8 | 444.4 | 451.8 | 352.7 | 419.8 | 442.3 |
| Netherlands | 119 | 110 | 585.3 | 575.0 | . | 569.3 | . | 576.0 | . | 577.8 |
| Norway | 129 | 125 | 537.8 | 538.6 | 534.8 | 529.3 | . | 595.9 | . | 455.6 |
| Russian Federation | 158 | 156 | 562.9 | 485.7 | 529.0 | 492.8 | . | 506.7 | . | . |
| Slovenia | 66 | 66 | 553.8 | 542.7 | 529.3 | 551.3 | . | . | . | . |
| Sweden | 155 | 148 | 497.7 | 496.1 | 516.4 | . | . | 478.5 | . | 478.1 |
| International Avg. | 133 | 123 | 504.8 | 490.3 | 494.3 | 510.5 | 460.3 | 502.0 | 419.8 | 444.5 |

Question : How often do your physics tests or examinations include a practical examination or laboratory problems?
 Location : TQP3-34B (PT2PPTPE)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted |
|-----------------------|--------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|
| | | | % | % | % | % | % | | Mean | Mean | Mean | Mean | Mean | |
| Armenia | 58 | 52 | 46.1 | 49.5 | 4.4 | 0.0 | . | 11.5 | 475.8 | 506.8 | 526.4 | . | . | 502.5 |
| Iran, Islamic Rep. of | 155 | 153 | 4.7 | 42.8 | 52.6 | 0.0 | . | 1.1 | 426.4 | 447.3 | 473.1 | . | . | 456.9 |
| Italy | 115 | 114 | 7.6 | 35.9 | 56.5 | 0.0 | . | 1.1 | 395.4 | 426.3 | 426.2 | . | . | 270.8 |
| Lebanon | 239 | 181 | 8.7 | 83.3 | 6.2 | 0.0 | 1.8 | 25.9 | 429.8 | 447.8 | 422.6 | . | 419.8 | 441.6 |
| Netherlands | 119 | 109 | 1.9 | 77.3 | 20.7 | 5.8 | . | 1.7 | 589.6 | 582.4 | 584.7 | 576.0 | . | 578.8 |
| Norway | 129 | 128 | 6.2 | 19.3 | 74.5 | 0.4 | . | 0.0 | 530.6 | 529.6 | 535.2 | 595.9 | . | . |
| Russian Federation | 158 | 156 | 8.1 | 71.1 | 20.8 | 0.0 | . | 0.9 | 490.5 | 536.5 | 479.3 | . | . | 557.3 |
| Slovenia | 66 | 65 | 8.3 | 73.2 | 18.5 | 0.0 | . | 1.1 | 525.9 | 533.3 | 539.6 | . | . | 633.7 |
| Sweden | 155 | 145 | 11.4 | 25.6 | 63.0 | 2.0 | . | 5.8 | 518.1 | 492.6 | 497.5 | 478.5 | . | 476.6 |
| International Avg. | 133 | 123 | 11.4 | 53.1 | 35.2 | 0.9 | 1.8 | 5.5 | 486.9 | 500.3 | 498.3 | 550.2 | 419.8 | 489.8 |

Question : How often do you include questions based on knowing facts and concepts in your physics tests or examinations?
Location : TQP3-35A (PT2PTEBF)

| Country | Sample | Valid N | 1.ALWAY | | 3.NEVER | Not | Not | Omitted | 1.ALWAY | | 3.NEVER | Not | Not | Omitted |
|-----------------------|--------|---------|-------------------------------|----------------------|----------------------------|-----------------------|---------------------|---------|----------------------------------|-------------------------|-------------------------------|--------------------------|------------------------|---------|
| | | | S OR ALMOST ALWAYS % | 2.SOMET IMES % | OR ALMOST NEVER % | Adminis tered % | Applica ble % | | S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | OR ALMOST NEVER Mean | Adminis tered Mean | Applica ble Mean | |
| Armenia | 58 | 46 | 46.0 | 54.0 | . | 0.0 | . | 18.3 | 479.7 | 500.8 | . | . | . | 509.4 |
| Iran, Islamic Rep. of | 155 | 154 | 71.5 | 27.6 | 0.9 | 0.0 | . | 1.1 | 454.2 | 471.6 | 596.2 | . | . | 423.2 |
| Italy | 115 | 114 | 75.7 | 23.2 | 1.1 | 0.0 | . | 1.1 | 423.8 | 423.1 | 452.7 | . | . | 270.8 |
| Lebanon | 239 | 187 | 38.8 | 52.9 | 6.5 | 0.0 | 1.8 | 23.6 | 449.0 | 440.6 | 461.1 | . | 419.8 | 439.3 |
| Netherlands | 119 | 109 | 15.0 | 49.5 | 35.5 | 5.8 | . | 2.9 | 571.4 | 586.4 | 583.8 | 576.0 | . | 572.2 |
| Norway | 129 | 128 | 45.8 | 46.8 | 7.4 | 0.4 | . | 0.0 | 528.3 | 538.2 | 541.4 | 595.9 | . | . |
| Russian Federation | 158 | 157 | 64.7 | 35.2 | 0.2 | 0.0 | . | 0.2 | 525.6 | 513.5 | 640.6 | . | . | 394.1 |
| Slovenia | 66 | 66 | 40.8 | 53.5 | 5.7 | 0.0 | . | 0.0 | 546.9 | 523.7 | 554.6 | . | . | . |
| Sweden | 155 | 148 | 72.2 | 25.0 | 2.8 | 2.0 | . | 2.0 | 494.6 | 506.0 | 496.3 | 478.5 | . | 488.9 |
| International Avg. | 133 | 123 | 52.3 | 40.9 | 7.5 | 0.9 | 1.8 | 5.5 | 497.1 | 500.4 | 540.8 | 550.2 | 419.8 | 442.6 |

Question : How often do you include questions based on the application of knowledge and understanding in your physics tests or examinations?
 Location : TQP3-35B (PT2PTEBA)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted |
|-----------------------|--------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|
| | | | % | % | % | % | % | | Mean | Mean | Mean | Mean | Mean | |
| Armenia | 58 | 48 | 65.5 | 34.5 | . | 0.0 | . | 16.2 | 491.8 | 488.2 | . | . | . | 514.3 |
| Iran, Islamic Rep. of | 155 | 153 | 66.9 | 31.4 | 1.7 | 0.0 | . | 1.0 | 461.4 | 457.2 | 374.4 | . | . | 581.0 |
| Italy | 115 | 114 | 85.6 | 13.4 | 1.0 | 0.0 | . | 1.1 | 429.0 | 384.3 | 521.7 | . | . | 270.8 |
| Lebanon | 239 | 193 | 79.1 | 19.1 | . | 0.0 | 1.7 | 21.5 | 446.4 | 440.7 | . | . | 419.8 | 438.7 |
| Netherlands | 119 | 110 | 88.5 | 11.5 | . | 5.8 | . | 1.3 | 583.3 | 580.6 | . | 576.0 | . | 577.8 |
| Norway | 129 | 128 | 89.9 | 10.1 | . | 0.4 | . | 0.0 | 534.6 | 527.2 | . | 595.9 | . | . |
| Russian Federation | 158 | 158 | 95.0 | 5.0 | . | 0.0 | . | 0.0 | 521.6 | 513.9 | . | . | . | . |
| Slovenia | 66 | 66 | 85.2 | 14.8 | . | 0.0 | . | 0.0 | 539.9 | 506.7 | . | . | . | . |
| Sweden | 155 | 149 | 87.7 | 11.3 | 1.0 | 2.0 | . | 0.5 | 498.1 | 491.9 | 494.7 | 478.5 | . | 487.1 |
| International Avg. | 133 | 124 | 82.6 | 16.8 | 1.2 | 0.9 | 1.7 | 4.6 | 500.7 | 487.9 | 463.6 | 550.2 | 419.8 | 478.3 |

Question : How often do you include questions involving developing hypotheses and designing scientific investigations in your physics tests or examinations?
 Location : TQP3-35C (PT2PTEDH)

| Country | Sample | Valid N | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted | 1.ALWAY S OR ALMOST ALWAYS | 2.SOMET IMES | 3.NEVER OR ALMOST NEVER | Not Adminis tered | Not Applica ble | Omitted |
|-----------------------|--------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|-------------------------------------|-----------------|----------------------------------|-------------------------|-----------------------|---------|
| | | | % | % | % | % | % | | Mean | Mean | Mean | Mean | Mean | |
| Armenia | 58 | 45 | 28.9 | 68.9 | 2.2 | 0.0 | . | 20.4 | 483.2 | 495.5 | 442.2 | . | . | 508.6 |
| Iran, Islamic Rep. of | 155 | 150 | 5.4 | 51.8 | 42.8 | 0.0 | . | 2.9 | 468.8 | 456.0 | 459.0 | . | . | 522.3 |
| Italy | 115 | 114 | 1.8 | 29.7 | 68.5 | 0.0 | . | 1.1 | 406.0 | 416.9 | 427.4 | . | . | 270.8 |
| Lebanon | 239 | 188 | 40.6 | 49.3 | 8.4 | 0.0 | 1.8 | 23.6 | 447.5 | 444.3 | 438.1 | . | 419.8 | 439.8 |
| Netherlands | 119 | 110 | 5.2 | 61.3 | 33.5 | 5.8 | . | 1.3 | 580.1 | 580.5 | 587.9 | 576.0 | . | 577.8 |
| Norway | 129 | 127 | . | 34.2 | 65.8 | 0.4 | . | 1.0 | . | 533.3 | 534.3 | 595.9 | . | 524.1 |
| Russian Federation | 158 | 158 | 5.9 | 63.0 | 31.2 | 0.0 | . | 0.0 | 554.0 | 528.2 | 501.0 | . | . | . |
| Slovenia | 66 | 66 | 7.2 | 42.9 | 50.0 | 0.0 | . | 0.0 | 565.9 | 540.6 | 525.6 | . | . | . |
| Sweden | 155 | 146 | 2.1 | 51.2 | 46.7 | 2.0 | . | 5.0 | 508.1 | 501.5 | 493.7 | 478.5 | . | 485.1 |
| International Avg. | 133 | 123 | 12.1 | 50.2 | 38.8 | 0.9 | 1.8 | 6.1 | 501.7 | 499.7 | 489.9 | 550.2 | 419.8 | 475.5 |

Question : How often do you include questions requiring explanations or justifications in your physics tests or examinations?
 Location : TQP3-35D (PT2PTEEJ)

| Country | Sample | Valid N | 1.ALWAY | | 3.NEVER | | | | | 1.ALWAY | | 3.NEVER | | | |
|-----------------------|--------|---------|-------------------------------|----------------------|----------------------------|------------------------------|----------------------------|--------------|-------|----------------------------------|-------------------------|-------------------------------|---------------------------------|-------------------------------|-----------------|
| | | | S OR ALMOST ALWAYS % | 2.SOMET IMES % | OR ALMOST NEVER % | Not Adminis tered % | Not Applica ble % | Omitted % | | S OR ALMOST ALWAYS Mean | 2.SOMET IMES Mean | OR ALMOST NEVER Mean | Not Adminis tered Mean | Not Applica ble Mean | Omitted Mean |
| Armenia | 58 | 50 | 79.6 | 20.4 | . | 0.0 | . | 11.9 | 502.1 | 484.8 | . | . | . | . | 463.8 |
| Iran, Islamic Rep. of | 155 | 152 | 33.7 | 62.9 | 3.4 | 0.0 | . | 1.7 | 450.7 | 463.6 | 463.9 | . | . | . | 494.3 |
| Italy | 115 | 114 | 61.2 | 35.2 | 3.5 | 0.0 | . | 1.1 | 422.9 | 420.7 | 473.1 | . | . | . | 270.8 |
| Lebanon | 239 | 190 | 71.6 | 25.9 | 0.7 | 0.0 | 1.8 | 23.2 | 449.0 | 435.4 | 423.0 | . | . | 419.8 | 439.4 |
| Netherlands | 119 | 109 | 15.9 | 70.6 | 13.6 | 5.8 | . | 2.9 | 588.6 | 580.9 | 589.1 | 576.0 | . | . | 572.2 |
| Norway | 129 | 128 | 78.5 | 21.0 | 0.5 | 0.4 | . | 0.0 | 536.9 | 523.8 | 472.3 | 595.9 | . | . | . |
| Russian Federation | 158 | 156 | 56.1 | 43.9 | . | 0.0 | . | 1.1 | 535.5 | 504.0 | . | . | . | . | 479.3 |
| Slovenia | 66 | 66 | 21.0 | 67.0 | 11.9 | 0.0 | . | 0.0 | 552.6 | 532.8 | 515.6 | . | . | . | . |
| Sweden | 155 | 149 | 83.5 | 16.5 | . | 2.0 | . | 0.5 | 497.3 | 497.8 | . | 478.5 | . | . | 487.1 |
| International Avg. | 133 | 124 | 55.7 | 40.4 | 5.6 | 0.9 | 1.8 | 4.7 | 504.0 | 493.8 | 489.5 | 550.2 | 419.8 | . | 458.1 |

Question : Average Percent of Students Taught Mechanics Topics
 Location : DERIVED (PTDPTPME)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 48 | 0.0 | 24.4 | 96.9 | 100.0 | 71.4 | 80.0 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 78.9 | 71.4 | 42.9 | 57.1 | 71.4 | 71.4 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 89.8 | 100.0 | 0.0 | 71.4 | 85.7 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 232 | 0.0 | 2.1 | 95.8 | 100.0 | 42.9 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 110 | 0.0 | 7.4 | 88.1 | 85.7 | 42.9 | 83.3 | 85.7 | 85.7 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 94.1 | 100.0 | 71.4 | 85.7 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | 157 | 0.0 | 0.4 | 98.8 | 100.0 | 57.1 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Slovenia | 66 | 66 | 0.0 | 0.0 | 90.2 | 85.7 | 71.4 | 83.3 | 85.7 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 146 | 0.0 | 7.1 | 94.2 | 100.0 | 71.4 | 85.7 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 128 | 0.0 | 4.8 | 91.9 | 93.7 | 52.4 | 78.2 | 85.7 | 88.9 | 92.1 | 96.8 | 100.0 | 100.0 | 100.0 |

Question : Average Percent of Students Taught Electricity and Magnetism Topics
 Location : DERIVED (PTDPTPEL)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|-------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 47 | 0.0 | 26.1 | 98.0 | 100.0 | 50.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 94.8 | 100.0 | 0.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 89.0 | 100.0 | 0.0 | 75.0 | 75.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 228 | 0.0 | 3.6 | 96.0 | 100.0 | 0.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 111 | 0.0 | 6.6 | 93.1 | 100.0 | 50.0 | 75.0 | 75.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 99.4 | 100.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 99.5 | 100.0 | 50.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Slovenia | 66 | 66 | 0.0 | 0.0 | 98.7 | 100.0 | 50.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 147 | 0.0 | 6.4 | 95.9 | 100.0 | 25.0 | 75.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 128 | 0.0 | 4.9 | 96.1 | 100.0 | 33.3 | 83.3 | 91.7 | 94.4 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

Question : Average Percent of Students Taught Heat and Temperature Topics
 Location : DERIVED (PTDPTPHE)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 48 | 0.0 | 24.4 | 91.1 | 100.0 | 33.3 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 94.7 | 100.0 | 33.3 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 89.6 | 100.0 | 0.0 | 66.7 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 223 | 0.0 | 6.5 | 42.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 111 | 0.0 | 6.6 | 91.4 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 127 | 0.0 | 1.0 | 92.3 | 100.0 | 66.7 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | 157 | 0.0 | 0.4 | 92.1 | 100.0 | 66.7 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Slovenia | 66 | 66 | 0.0 | 0.0 | 95.9 | 100.0 | 0.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 146 | 0.0 | 7.1 | 84.2 | 100.0 | 0.0 | 33.3 | 50.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 5.2 | 86.0 | 88.9 | 22.2 | 44.4 | 61.1 | 81.5 | 92.6 | 100.0 | 100.0 | 100.0 | 100.0 |

Question : Average Percent of Students Taught Atomic and Nuclear Physics Topics
 Location : DERIVED (PTDPTPAT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|-----|------|------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 49 | 0.0 | 20.5 | 77.2 | 100.0 | 0.0 | 0.0 | 0.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 154 | 0.0 | 0.7 | 89.8 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 39.6 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 234 | 0.0 | 1.6 | 90.7 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 110 | 0.0 | 7.4 | 92.5 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 87.3 | 100.0 | 0.0 | 66.7 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 82.8 | 100.0 | 0.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Slovenia | 66 | 66 | 0.0 | 0.0 | 84.9 | 100.0 | 0.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 147 | 0.0 | 6.4 | 71.7 | 100.0 | 0.0 | 0.0 | 33.3 | 33.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 129 | 0.0 | 4.2 | 79.6 | 88.9 | 0.0 | 18.5 | 40.7 | 66.7 | 92.6 | 96.3 | 100.0 | 100.0 | 100.0 |

Question : Average Percent of Students Taught All Physics Topics
 Location : DERIVED (PTDPTPOV)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|------|------|------|--------|-------|-------|-------|-------|
| Armenia | 58 | 49 | 0.0 | 20.5 | 87.2 | 100.0 | 0.0 | 38.7 | 68.8 | 83.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 89.5 | 92.9 | 27.4 | 57.4 | 76.2 | 88.1 | 92.9 | 96.4 | 96.4 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 77.0 | 91.7 | 25.0 | 56.8 | 60.4 | 66.7 | 75.0 | 88.1 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 234 | 0.0 | 1.6 | 81.9 | 75.0 | 35.7 | 58.9 | 66.7 | 75.0 | 83.3 | 91.7 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 111 | 0.0 | 6.6 | 91.3 | 96.4 | 48.5 | 69.9 | 75.0 | 88.1 | 96.4 | 96.4 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 93.3 | 100.0 | 65.2 | 79.8 | 83.3 | 88.1 | 96.4 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | 158 | 0.0 | 0.0 | 93.3 | 100.0 | 60.4 | 68.8 | 75.0 | 91.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Slovenia | 66 | 66 | 0.0 | 0.0 | 92.4 | 96.4 | 58.9 | 71.4 | 71.4 | 88.1 | 96.4 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 147 | 0.0 | 6.4 | 86.5 | 100.0 | 47.9 | 63.1 | 68.8 | 79.8 | 90.2 | 96.4 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 129 | 0.0 | 4.1 | 88.1 | 94.7 | 41.0 | 62.8 | 71.7 | 83.2 | 92.3 | 96.6 | 99.6 | 100.0 | 100.0 |

Question : Teachers Feel Very Well Prepared to Teach Mechanics Topics
 Location : DERIVED (PTDPTIME)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|------|------|------|--------|-------|-------|-------|-------|
| Armenia | 58 | 58 | 0.0 | 0.0 | 80.0 | 100.0 | 0.0 | 28.6 | 42.9 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 80.9 | 85.7 | 14.3 | 57.1 | 57.1 | 71.4 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 50.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 234 | 0.0 | 1.9 | 92.0 | 100.0 | 0.0 | 57.1 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 112 | 0.0 | 5.8 | 80.0 | 85.7 | 0.0 | 0.0 | 42.9 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 93.9 | 100.0 | 0.0 | 71.4 | 85.7 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | . | 0.0 | 100.0 | . | . | . | . | . | . | . | . | . | . | . |
| Slovenia | 66 | 65 | 0.0 | 0.8 | 77.3 | 100.0 | 0.0 | 0.0 | 28.6 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 150 | 0.0 | 2.4 | 89.8 | 100.0 | 0.0 | 57.1 | 71.4 | 85.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 12.5 | 80.5 | 83.9 | 1.8 | 33.9 | 51.8 | 69.6 | 89.3 | 96.4 | 100.0 | 100.0 | 100.0 |

Question : Teachers Feel Very Well Prepared to Teach Electricity and Magnetism Topics
 Location : DERIVED (PTDPTTEL)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|-----|------|------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 58 | 0.0 | 0.0 | 82.2 | 100.0 | 0.0 | 50.0 | 50.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 92.0 | 100.0 | 0.0 | 50.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 49.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 50.0 | 75.0 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 236 | 0.0 | 0.6 | 92.0 | 100.0 | 0.0 | 25.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 112 | 0.0 | 5.8 | 83.2 | 100.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 96.1 | 100.0 | 0.0 | 75.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | . | 0.0 | 100.0 | . | . | . | . | . | . | . | . | . | . | . |
| Slovenia | 66 | 64 | 0.0 | 2.0 | 79.9 | 100.0 | 0.0 | 0.0 | 25.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 150 | 0.0 | 2.4 | 90.1 | 100.0 | 0.0 | 50.0 | 75.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 12.5 | 83.1 | 87.5 | 0.0 | 31.3 | 46.9 | 81.3 | 93.8 | 96.9 | 100.0 | 100.0 | 100.0 |

Question : Teachers Feel Very Well Prepared to Teach Heat and Temperature Topics
 Location : DERIVED (PTDPTTHE)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|-----|------|------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 57 | 0.0 | 1.5 | 80.9 | 100.0 | 0.0 | 0.0 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 91.2 | 100.0 | 0.0 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 47.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 232 | 0.0 | 2.3 | 66.1 | 100.0 | 0.0 | 0.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 112 | 0.0 | 5.8 | 85.4 | 100.0 | 0.0 | 0.0 | 33.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 90.3 | 100.0 | 0.0 | 0.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | . | 0.0 | 100.0 | . | . | . | . | . | . | . | . | . | . | . |
| Slovenia | 66 | 65 | 0.0 | 0.8 | 77.6 | 100.0 | 0.0 | 0.0 | 0.0 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 150 | 0.0 | 2.4 | 77.3 | 100.0 | 0.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 12.7 | 77.0 | 87.5 | 0.0 | 8.3 | 33.3 | 66.7 | 91.7 | 100.0 | 100.0 | 100.0 | 100.0 |

Question : Teachers Feel Very Well Prepared to Teach Atomic and Nuclear Physics Topics
 Location : DERIVED (PTDPTTAT)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|-----|------|-------|-------|--------|-------|-------|-------|-------|
| Armenia | 58 | 58 | 0.0 | 0.0 | 67.8 | 100.0 | 0.0 | 0.0 | 0.0 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 78.2 | 66.7 | 0.0 | 33.3 | 66.7 | 66.7 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 22.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 33.3 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 237 | 0.0 | 0.4 | 93.2 | 100.0 | 0.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 112 | 0.0 | 5.8 | 86.9 | 100.0 | 0.0 | 0.0 | 0.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 91.7 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | . | 0.0 | 100.0 | . | . | . | . | . | . | . | . | . | . | . |
| Slovenia | 66 | 65 | 0.0 | 0.8 | 69.7 | 100.0 | 0.0 | 0.0 | 0.0 | 33.3 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 150 | 0.0 | 2.4 | 87.6 | 100.0 | 0.0 | 33.3 | 66.7 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 12.3 | 74.7 | 83.3 | 0.0 | 12.5 | 37.5 | 70.8 | 79.2 | 91.7 | 100.0 | 100.0 | 100.0 |

Question : Teachers Feel Very Well Prepared to Teach All Physics Topics
 Location : DERIVED (PTDPTTOV)

| Country | Sample | Valid N | N.A. % | Omit % | Mean | Mode | Min | P5 | P10 | Q1 | Median | Q3 | P90 | P95 | Max |
|-----------------------|--------|---------|-----------|-----------|------|-------|------|------|------|------|--------|-------|-------|-------|-------|
| Armenia | 58 | 58 | 0.0 | 0.0 | 77.6 | 100.0 | 0.0 | 48.2 | 50.9 | 71.4 | 81.8 | 91.7 | 100.0 | 100.0 | 100.0 |
| Iran, Islamic Rep. of | 155 | 155 | 0.0 | 0.0 | 85.6 | 88.1 | 3.6 | 58.0 | 69.9 | 79.8 | 88.1 | 96.4 | 100.0 | 100.0 | 100.0 |
| Italy | 115 | 114 | 0.0 | 1.1 | 42.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 49.7 | 68.8 | 100.0 | 100.0 | 100.0 |
| Lebanon | 239 | 237 | 0.0 | 0.4 | 85.7 | 100.0 | 0.0 | 33.9 | 66.4 | 79.8 | 91.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| Netherlands | 119 | 112 | 0.0 | 5.8 | 83.9 | 96.4 | 0.0 | 0.0 | 46.4 | 88.1 | 96.4 | 100.0 | 100.0 | 100.0 | 100.0 |
| Norway | 129 | 128 | 0.0 | 0.4 | 93.0 | 100.0 | 14.3 | 69.9 | 79.8 | 90.2 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Russian Federation | 158 | . | 0.0 | 100.0 | . | . | . | . | . | . | . | . | . | . | . |
| Slovenia | 66 | 65 | 0.0 | 0.8 | 76.1 | 100.0 | 0.0 | 0.0 | 33.9 | 61.3 | 90.2 | 100.0 | 100.0 | 100.0 | 100.0 |
| Sweden | 155 | 150 | 0.0 | 2.4 | 86.2 | 100.0 | 0.0 | 53.3 | 67.9 | 79.8 | 91.7 | 100.0 | 100.0 | 100.0 | 100.0 |
| International Avg. | 133 | 127 | 0.0 | 12.3 | 78.8 | 85.6 | 2.2 | 32.9 | 51.9 | 68.8 | 86.2 | 94.6 | 100.0 | 100.0 | 100.0 |

Question : Index of Teachers' Participation in Professional Activities in Physics (PAP)
Location : DERIVED (PTDPPAP)

| | | | NOT ADMINIS | | | | | 2. | | | | NOT ADMINIS |
|-----------------------|--------|---------|-------------|-----------|--------|---------|-------|---------|--------|--------|---------|-------------|
| | | | 1. HIGH | 2. MEDIUM | 3. LOW | MISSING | TERED | 1. HIGH | MEDIUM | 3. LOW | MISSING | TERED |
| Country | Sample | Valid N | % | % | % | % | % | Mean | Mean | Mean | Mean | Mean |
| Armenia | 58 | 57 | 5.0 | 69.8 | 25.2 | 1.2 | 0.0 | 501.7 | 499.7 | 478.9 | 487.5 | . |
| Iran, Islamic Rep. of | 155 | 155 | 23.5 | 66.5 | 10.0 | 0.0 | 0.0 | 453.4 | 462.0 | 460.9 | . | . |
| Italy | 115 | 114 | 17.6 | 64.9 | 17.5 | 1.1 | 0.0 | 428.7 | 416.9 | 445.2 | 270.8 | . |
| Lebanon | 239 | 233 | 18.9 | 48.3 | 32.8 | 2.3 | 0.0 | 460.8 | 438.9 | 440.7 | 439.7 | . |
| Netherlands | 119 | 112 | 21.4 | 55.2 | 23.3 | 5.8 | 0.0 | 574.6 | 583.6 | 588.8 | 576.0 | . |
| Norway | 129 | 128 | 3.7 | 49.3 | 47.0 | 0.4 | 0.0 | 532.0 | 530.0 | 538.0 | 595.9 | . |
| Russian Federation | 158 | 158 | 40.6 | 51.5 | 7.9 | 0.0 | 0.0 | 533.4 | 516.3 | 491.0 | . | . |
| Slovenia | 66 | 66 | 52.3 | 37.7 | 10.0 | 0.0 | 0.0 | 533.7 | 543.9 | 507.7 | . | . |
| Sweden | 155 | 151 | 8.5 | 56.4 | 35.1 | 2.0 | 0.0 | 478.1 | 498.3 | 500.4 | 478.5 | . |
| International Avg. | 133 | 130 | 21.3 | 55.5 | 23.2 | 1.4 | 0.0 | 499.6 | 498.8 | 494.6 | 474.8 | . |

Question : Frequency of Collaboration Among Physics Teachers
 Location : DERIVED (PTDPCOLL)

| Country | Sample | Valid N | 1. AT LEAST WEEKLY % | 2. 2 OR 3 TIMES PER MONTH % | 3. NEVER OR ALMOST NEVER % | MISSING % | NOT ADMINIS TERED % | 1. AT LEAST WEEKLY Mean | 2. 2 OR 3 TIMES PER MONTH Mean | 3. NEVER OR ALMOST NEVER Mean | MISSING Mean | NOT ADMINIS TERED Mean |
|-----------------------|--------|---------|-------------------------------|--|---|--------------|------------------------------|----------------------------------|---|--|-----------------|---------------------------------|
| Armenia | 58 | 54 | 42.1 | 56.1 | 1.9 | 7.1 | 0.0 | 500.5 | 496.0 | 442.2 | 462.3 | . |
| Iran, Islamic Rep. of | 155 | 154 | 7.9 | 54.8 | 37.3 | 0.3 | 0.0 | 457.1 | 459.8 | 461.0 | 398.1 | . |
| Italy | 115 | 114 | 4.9 | 49.2 | 45.9 | 1.1 | 0.0 | 439.0 | 432.0 | 413.6 | 270.8 | . |
| Lebanon | 239 | 232 | 21.3 | 60.9 | 17.8 | 2.7 | 0.0 | 441.8 | 443.9 | 443.1 | 449.8 | . |
| Netherlands | 119 | 112 | 3.6 | 61.3 | 35.1 | 5.8 | 0.0 | 549.5 | 583.1 | 586.0 | 576.0 | . |
| Norway | 129 | 127 | 5.9 | 73.9 | 20.2 | 1.0 | 0.0 | 556.2 | 531.3 | 537.1 | 554.0 | . |
| Russian Federation | 158 | 158 | 45.8 | 49.4 | 4.8 | 0.0 | 0.0 | 535.3 | 511.8 | 484.3 | . | . |
| Slovenia | 66 | 64 | 7.3 | 49.7 | 42.9 | 2.7 | 0.0 | 576.0 | 544.5 | 513.8 | 583.8 | . |
| Sweden | 155 | 151 | 22.9 | 66.7 | 10.4 | 2.0 | 0.0 | 488.7 | 499.1 | 504.5 | 478.5 | . |
| International Avg. | 133 | 130 | 18.0 | 58.0 | 24.0 | 2.5 | 0.0 | 504.9 | 500.2 | 487.3 | 471.7 | . |

Question : Class Size for Physics Instruction
 Location : DERIVED (PTDPSUD)

| Country | Sample | Valid N | 1. 0 | 2. 25 | 3. 33 | 3. MORE THAN 40 | MISSING % | NOT ADMINIS TERED % | 1. 0 | 2. 25 | 3. 33 | 3. MORE THAN 40 | MISSING Mean | NOT ADMINIS TERED Mean |
|-----------------------|--------|---------|----------------------------|----------------------------|----------------------------|-----------------------|--------------|------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------|-----------------|---------------------------------|
| | | | TO 24 STUDENT S % | TO 32 STUDENT S % | TO 40 STUDENT S % | STUDENT S % | | | TO 24 STUDENT S Mean | TO 32 STUDENT S Mean | TO 40 STUDENT S Mean | STUDENT S Mean | | |
| Armenia | 58 | 42 | 43.0 | 48.1 | 8.9 | . | 29.7 | 0.0 | 513.7 | 479.3 | 444.2 | . | 502.6 | . |
| Iran, Islamic Rep. of | 155 | 155 | 28.1 | 31.3 | 11.6 | 29.0 | 0.0 | 0.0 | 437.5 | 478.4 | 448.3 | 466.1 | . | . |
| Italy | 115 | 114 | 80.3 | 19.7 | . | . | 1.1 | 0.0 | 431.1 | 394.8 | . | . | 270.8 | . |
| Lebanon | 239 | 239 | 78.3 | 14.4 | 3.7 | 3.6 | 0.0 | 0.0 | 446.0 | 435.5 | 445.6 | 419.2 | . | . |
| Netherlands | 119 | 110 | 88.3 | 11.7 | . | . | 7.1 | 0.0 | 585.8 | 558.5 | . | . | 581.2 | . |
| Norway | 129 | 128 | 87.9 | 12.1 | . | . | 0.4 | 0.0 | 533.1 | 539.3 | . | . | 595.9 | . |
| Russian Federation | 158 | 158 | 63.1 | 36.9 | . | . | 0.0 | 0.0 | 514.0 | 533.6 | . | . | . | . |
| Slovenia | 66 | 63 | 51.2 | 38.2 | 7.4 | 3.2 | 7.2 | 0.0 | 526.0 | 546.9 | 537.1 | 606.7 | 504.0 | . |
| Sweden | 155 | 149 | 60.8 | 37.9 | 1.3 | . | 2.8 | 0.0 | 497.2 | 498.8 | 455.9 | . | 485.1 | . |
| International Avg. | 133 | 129 | 64.6 | 27.8 | 6.6 | 11.9 | 5.4 | 0.0 | 498.3 | 496.1 | 466.2 | 497.3 | 489.9 | . |

Question : Index of Student Factors Limiting Instruction in Physics
 Location : DERIVED (PTDPPCFL)

| Country | Sample | Valid N | 2. | | | | NOT | 2. | | | | NOT |
|-----------------------|--------|---------|--------------|-------------|-------------|--------------|-----------------------|-----------------|----------------|----------------|-----------------|--------------------------|
| | | | 1. HIGH % | MEDIUM % | 3. LOW % | MISSING % | ADMINIS TERED % | 1. HIGH Mean | MEDIUM Mean | 3. LOW Mean | MISSING Mean | ADMINIS TERED Mean |
| Armenia | 58 | 47 | 22.7 | 58.3 | 19.0 | 24.1 | 0.0 | 469.3 | 508.8 | 497.5 | 484.2 | . |
| Iran, Islamic Rep. of | 155 | 153 | 20.5 | 59.9 | 19.6 | 0.8 | 0.0 | 491.9 | 463.8 | 415.4 | 433.5 | . |
| Italy | 115 | 114 | 16.6 | 71.1 | 12.3 | 1.1 | 0.0 | 464.6 | 416.2 | 413.6 | 270.8 | . |
| Lebanon | 239 | 226 | 30.2 | 56.1 | 13.7 | 5.7 | 0.0 | 454.7 | 438.6 | 433.2 | 456.6 | . |
| Netherlands | 119 | 112 | 43.4 | 54.2 | 2.4 | 5.8 | 0.0 | 591.0 | 576.6 | 579.3 | 576.0 | . |
| Norway | 129 | 128 | 53.7 | 43.9 | 2.4 | 0.4 | 0.0 | 533.7 | 533.1 | 552.0 | 595.9 | . |
| Russian Federation | 158 | 157 | 21.6 | 58.7 | 19.7 | 0.8 | 0.0 | 551.0 | 508.3 | 524.1 | 594.0 | . |
| Slovenia | 66 | 66 | 34.1 | 55.3 | 10.6 | 0.0 | 0.0 | 540.3 | 536.9 | 507.5 | . | . |
| Sweden | 155 | 148 | 44.7 | 51.3 | 3.9 | 4.8 | 0.0 | 516.2 | 485.5 | 451.1 | 478.3 | . |
| International Avg. | 133 | 128 | 32.0 | 56.5 | 11.5 | 4.9 | 0.0 | 512.5 | 496.4 | 486.0 | 486.2 | . |

Question : Index of Teachers' Emphasis on Advanced Mathematics Homework (EPH)
 Location : DERIVED (PTDPEPH)

| Country | Sample | Valid N | 2. | | | | | NOT | 2. | | 3. | | NOT |
|-----------------------|--------|---------|--------------|-------------|----------|--------------|-----------------------|-----------------|----------------|-------------|-----------------|--------------------------|-----|
| | | | 1. HIGH % | MEDIUM % | LOW % | MISSING % | ADMINIS TERED % | 1. HIGH Mean | MEDIUM Mean | LOW Mean | MISSING Mean | ADMINIS TERED Mean | |
| Armenia | 58 | 45 | 71.6 | 22.3 | 6.0 | 25.5 | 0.0 | 506.9 | 475.8 | 445.1 | 489.1 | . | |
| Iran, Islamic Rep. of | 155 | 154 | 71.4 | 16.1 | 12.5 | 0.8 | 0.0 | 461.3 | 449.0 | 456.1 | 606.0 | . | |
| Italy | 115 | 114 | 67.0 | 21.5 | 11.5 | 1.1 | 0.0 | 437.1 | 370.4 | 447.5 | 270.8 | . | |
| Lebanon | 239 | 228 | 86.3 | 10.2 | 3.5 | 4.3 | 0.0 | 443.9 | 432.0 | 439.2 | 464.5 | . | |
| Netherlands | 119 | 109 | 46.6 | 28.8 | 24.5 | 7.3 | 0.0 | 583.7 | 589.6 | 573.9 | 576.4 | . | |
| Norway | 129 | 127 | 76.9 | 13.9 | 9.2 | 1.2 | 0.0 | 531.1 | 548.5 | 533.4 | 565.6 | . | |
| Russian Federation | 158 | 158 | 83.5 | 14.4 | 2.2 | 0.0 | 0.0 | 534.6 | 441.9 | 530.2 | . | . | |
| Slovenia | 66 | 65 | 14.7 | 38.7 | 46.6 | 0.8 | 0.0 | 550.6 | 541.4 | 523.7 | 593.7 | . | |
| Sweden | 155 | 146 | 34.5 | 33.0 | 32.5 | 4.3 | 0.0 | 505.7 | 491.0 | 492.9 | 502.8 | . | |
| International Avg. | 133 | 127 | 61.4 | 22.1 | 16.5 | 5.0 | 0.0 | 506.1 | 482.2 | 493.5 | 508.6 | . | |

Question : Index of Physics Teachers' Perceptions of Safety in Their Schools (TPSS)
 Location : DERIVED (PTDPTPSS)

| Country | Sample | Valid N | NOT ADMINIS | | | | | 2. | | | | NOT ADMINIS |
|-----------------------|--------|---------|-------------|-------------|----------|-----------|---------|--------------|-------------|-------------|--------------|-------------|
| | | | 1. HIGH % | 2. MEDIUM % | 3. LOW % | MISSING % | TERED % | 1. HIGH Mean | MEDIUM Mean | 3. LOW Mean | MISSING Mean | TERED Mean |
| Armenia | 58 | 57 | 88.5 | 8.3 | 3.2 | 2.3 | 0.0 | 490.0 | 527.5 | 506.7 | 526.8 | . |
| Iran, Islamic Rep. of | 155 | 149 | 99.4 | 0.6 | . | 5.0 | 0.0 | 463.0 | 410.9 | . | 406.1 | . |
| Italy | 115 | 114 | 80.0 | 15.9 | 4.1 | 1.1 | 0.0 | 430.4 | 396.2 | 405.7 | 270.8 | . |
| Lebanon | 239 | 238 | 85.6 | 13.1 | 1.3 | 0.3 | 0.0 | 445.8 | 429.3 | 431.1 | 480.0 | . |
| Netherlands | 119 | 112 | 94.1 | 4.7 | 1.2 | 5.8 | 0.0 | 585.1 | 542.7 | 570.2 | 576.0 | . |
| Norway | 129 | 128 | 99.3 | 0.7 | . | 0.4 | 0.0 | 534.0 | 511.5 | . | 595.9 | . |
| Russian Federation | 158 | 157 | 80.5 | 18.2 | 1.3 | 0.5 | 0.0 | 521.6 | 512.0 | 550.1 | 720.0 | . |
| Slovenia | 66 | 65 | 88.4 | 8.3 | 3.4 | 0.8 | 0.0 | 538.0 | 518.2 | 482.8 | 593.7 | . |
| Sweden | 155 | 151 | 94.3 | 5.7 | . | 2.0 | 0.0 | 498.9 | 471.1 | . | 478.5 | . |
| International Avg. | 133 | 130 | 90.0 | 8.4 | 2.4 | 2.0 | 0.0 | 500.8 | 479.9 | 491.1 | 516.4 | . |

Question : Index of Physics Teachers' Perceptions of School Climate (TPSC)
 Location : DERIVED (PTDPTPSC)

| Country | Sample | Valid N | 1. HIGH % | 2. | 3. LOW % | MISSING % | NOT ADMINIS | 1. HIGH Mean | 2. | 3. LOW Mean | MISSING Mean | NOT ADMINIS |
|-----------------------|--------|---------|--------------|-------------|-------------|--------------|----------------|-----------------|----------------|----------------|-----------------|----------------|
| | | | | MEDIUM % | | | TERED % | | MEDIUM Mean | | | TERED Mean |
| Armenia | 58 | 57 | 7.1 | 57.9 | 35.0 | 2.3 | 0.0 | 479.2 | 487.0 | 507.7 | 526.8 | . |
| Iran, Islamic Rep. of | 155 | 155 | 16.4 | 52.1 | 31.5 | 0.0 | 0.0 | 501.0 | 461.9 | 435.2 | . | . |
| Italy | 115 | 114 | 2.2 | 45.6 | 52.2 | 1.1 | 0.0 | 412.4 | 429.0 | 420.0 | 270.8 | . |
| Lebanon | 239 | 235 | 32.9 | 44.3 | 22.9 | 1.0 | 0.0 | 460.4 | 444.2 | 419.1 | 418.4 | . |
| Netherlands | 119 | 110 | 2.4 | 54.0 | 43.6 | 8.3 | 0.0 | 602.0 | 588.2 | 573.4 | 586.7 | . |
| Norway | 129 | 122 | 7.2 | 72.8 | 20.0 | 4.9 | 0.0 | 537.6 | 535.7 | 528.8 | 526.9 | . |
| Russian Federation | 158 | 158 | 9.0 | 66.5 | 24.5 | 0.0 | 0.0 | 543.0 | 536.4 | 472.2 | . | . |
| Slovenia | 66 | 64 | 9.7 | 55.4 | 34.8 | 2.8 | 0.0 | 599.7 | 537.3 | 510.6 | 564.6 | . |
| Sweden | 155 | 149 | 9.5 | 57.6 | 32.9 | 2.6 | 0.0 | 523.4 | 504.8 | 476.5 | 485.1 | . |
| International Avg. | 133 | 129 | 10.7 | 56.3 | 33.0 | 2.6 | 0.0 | 517.6 | 502.7 | 482.6 | 482.8 | . |