Solutions

2.1 Intrinsic motivation comes from enjoying the activity; extrinsic from rewards or punishments (1). Autonomy, competence and relatedness (2: all three for 2, two for 1).

2.2 Children who expected a certificate for drawing later spent about 9% of their free time drawing, against about 17–18% in the other groups (2). The overjustification effect: the reward became the reason for the activity (1).

2.3 About 96% of participants come from Western, industrialised countries holding about 12% of the world's people (1), so a finding may reflect that culture and must be tested before it is applied in China (1).

2.4 Mean $= 40 \div 5 = 8$ hours (1); median 5 (1); mode 5 (1). The median (or mode), because the one extreme score of 21 pulls the mean up (1).

2.5 -0.56: a moderate negative correlation; as one variable rises the other tends to fall (1). $+0.08$: almost no linear relationship (1).

2.6 $p = 0.03$: below 0.05, so the result is statistically significant and the null hypothesis is rejected (1). $p = 0.20$: not significant; the null hypothesis is retained (1).

2.7 The data are correlational (1), so the direction of cause is unknown: unhappy teenagers may use more social media (1). (Also accept: the effect explained at most 0.4%.)

3.1 Any one, developed: the hours are self-reported, so students may under-report gaming (social desirability) (1), which weakens the measure of the IV (1) and could hide or exaggerate the link (1). Or: one city's students may not represent others; or: correlation cannot show cause.

3.2 The correlation is $r = -0.12$, a very weak negative relationship (1): students who game more score only slightly lower (1). $p = 0.09$ is above 0.05, so the result is not statistically significant (1); it could be due to chance (1). Even a significant result would be correlational: weaker students might game more, not the reverse (1). Conclusion: Source C gives little support to the claim (1).

3.3 Triangulation: add interviews with students and teachers, or compare with test data, so the themes do not rest on parents' views alone (2). A second coder checks the themes and the agreement is reported (1). Member checking: show parents the themes to confirm they reflect what they meant (1). A wider sample, beyond one school's parent group, which may hold similar views (1). Reflexivity: the researcher records her own views on gaming, which may have shaped the coding (1).

3.4 One mark for each well-developed point, up to 6 for the plan, judged with the full Paper 3 criteria. Model plan: (1) The claim is causal, so the evidence must show more than a link. (2) Source C: very weak, non-significant correlation; little support. (3) Source C's self-report and correlational design limit it further. (4) Source D: parents describe less homework time and late nights, a possible route from gaming to results, which supports the claim. (5) But Source D is eight parents and one coder, so credibility and transferability are low, and it also shows a benefit (friendships). (6) Judgement: the sources suggest at most a small effect and cannot show cause, so the claim is only weakly supported.

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Review guidance: the r value, the p value, cause and a linked conclusion; why the median; (R1 3.4) the sources weighed, not listed. Authored guidance.