Views on Chemistry Practicals

This questionnaire has been developed so that I can find out what you think about Chemistry practicals. Please fill it in as honestly as possible, so that I can use the information to improve our Chemistry practicals. I want to know what you think the benefits and problems of Chemistry practicals are.
<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
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</thead>
<tbody>
<tr>
<td>1. A benefit (good thing) of Chemistry practicals is to develop skills.</td>
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<td>2. A benefit of Chemistry practicals is to gain more knowledge.</td>
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<td>3. A benefit (good thing) of Chemistry practicals is to Prove a Theory.</td>
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*please make sure you have answered each question once*
The rest of the questionnaire is a multiple choice showing me what you think about chemistry practicals:

- There is no right and wrong answer.
- You can have more than one answer for each question.
- For each question, please circle any answer which shows what you think about chemistry practicals.
- PLEASE circle at least one answer for each question. Circle the last answer of each question if none of the other answers show what you think about Chemistry practicals.

<table>
<thead>
<tr>
<th>e.g. If the middle two answers show what you think about Chemistry practicals, then put circles around the middle two numbers.</th>
</tr>
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<tr>
<td>You don't think this</td>
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1. A benefit (good thing) of Chemistry practicals is to develop skills.
   - Yes, because I need a variety of practical skills. | 25 |
   - Yes, because I learn to measure. | 26 |
   - Yes, because I learn to observe. | 27 |
   - Yes, because I must learn how to classify chemicals. | 28 |
   - Yes, so I know how to survive in life. | 29 |
   - Yes, as I want to become a scientist or something related to science. | 30 |
   - Yes, but some learners don’t know how to develop skills. | 31 |
   - None of these show what I think about Chemistry practicals. | 32 |

2. A benefit of Chemistry practicals is to gain more knowledge.
   - Yes, I gain knowledge which I could use in many different ways. | 33 |
   - Yes, I gain specific Chemistry knowledge when we do Chemistry practicals. | 34 |
   - Yes, because in everyday life I notice things similar to the practicals. | 35 |
   - Yes, because when I do practicals, I remember the concept for much longer. | 36 |
   - Yes, because I can avoid serious injuries or death by having knowledge of dangerous reactions. | 37 |
   - No, I don’t think chemistry practicals help me gain more knowledge. | 38 |
   - None of these show what I think about Chemistry practicals. | 39 |
3. A benefit (good thing) of Chemistry practicals is to Prove a Theory.

- Yes, because a practical makes me put the theory into my own words, which is easier than textbook language.  
- Yes, proving a theory is good but most of the time the practicals don’t work.  
- Yes, because proving theories makes theories easier to believe.  
- No, most theories have already been proved by qualified scientists over and over again. It is not necessary to prove them once again.  
- Yes, because by actually proving it I understand the theory.  
- None of these show what I think about Chemistry practicals.

4. A benefit of Chemistry practicals is to learn to handle apparatus.

- No, because I might never use the apparatus again in my life.  
- Yes, because learning to handle apparatus will help me prepare for the world.  
- Yes, because if I never handle apparatus, I am nervous when using the apparatus by myself.  
- Yes, I must learn to handle apparatus because of unknown dangers in Chemistry practicals.  
- Yes, as all apparatus is important and should be handled with care.  
- Yes, I benefit from learning to handle apparatus because practice makes perfect.  
- None of these show what I think about Chemistry practicals.

5. A benefit of Chemistry practicals is to know how chemicals react.

- Yes, as long as the practicals don’t use dangerous chemicals.  
- No, because knowing how chemicals react will never affect me.  
- Yes, a practical helps me understand that specific reaction.  
- Yes, so when I am older I will know the basic reactions and I will know what to do.  
- None of these show what I think about Chemistry practicals.  

6. Chemistry practicals are good when I can investigate a question I’m curious about.

- Yes, because I learn more about Chemistry when I’m curious.  
- Yes, because investigating is the most fun part of science.  
- Yes, because investigating lets me find out why something has happened.  
- Yes, because doing investigations show me how to investigate.  
- No, because we are not given time and equipment for investigations, although I would like to find out things for myself.  
- No, because I do not have the knowledge to investigate.  
- None of these show what I think about Chemistry practicals.  

7. Chemistry practicals help me to know what is meant by Chemistry.

- Yes, because Chemistry practicals help me to know chemicals and how they work.  
- Yes, but I need theory before practicals for Chemistry practicals to help me know what is meant by Chemistry.  
- Yes, because Chemistry practicals help me identify characteristics and properties of certain substances.  
- Yes, because the practicals help me understand what my teacher is trying to tell us.  
- Yes, because by doing practicals I can familiarize myself with the work in Chemistry.  
- Yes, because doing practicals allows me to get the feeling of Chemistry.  
- None of these show what I think about Chemistry practicals.
8. Chemistry practicals benefit me when I follow the instructions.
   - Yes, but only if the practical goes well. 72
   - Yes, because then I get better marks. 73
   - Yes, because I actually learn something if I follow instructions. 74
   - Yes, because then everyone has a good time. 75
   - No, because instructions limit my ability to think freely. 76
   - Yes, following instructions is better for understanding what’s happening in the practical. 77
   - Yes, because I will not hurt myself if I follow the instructions. 79
   - None of these show what I think about Chemistry practicals. 80

9. A benefit (good thing) of Chemistry practicals is to work as a group.
   - No, because some people don’t work. They get the same marks but don’t do any work. 81
   - Yes, because working in groups at school helps me to know how to get along with other people. 82
   - Yes, because working as a group is an opportunity for learners to help learners. 83
   - No, because the clever learners take over and the others don’t reach their full potential. 84
   - Yes, because working together is fun! 85
   - No, because groups make it difficult for me to benefit from the practical. 86
   - Yes, but I benefit only if I do some of the practical work myself. 87
   - None of these show what I think about Chemistry practicals. 88

10. Chemistry practicals benefit me when I interpret results.
    (interpret = work out the meaning of the results).
    - Yes, if I interpret the results before I am given the explanation. 89
    - Yes, because interpreting results help to broaden my thought patterns. 90
    - Yes, because I learn to think logically. 91
    - Yes, because interpreting results makes me find out a lot of things for myself. 92
    - Yes, because interpreting results makes me understand the practical better. 93
    - None of these show what I think about Chemistry practicals. 94

11. Chemistry practicals are good when I can apply Chemistry to things I know.
    (e.g. cold drink, unleaded chemicals, Chemistry in the kitchen, clean water, etc.)
    - Yes, because applying Chemistry can be a good survival tactic. 95
    - Yes, because by using things that people see every day, I can go home and show others. 96
    - Yes, but it depends on my individual interests. 97
    - Yes, because applying Chemistry to things I know is a lot more useful than learning about useless information. 98
    - Yes, because it helps me when we do practicals using things that I am familiar with. 99
    - None of these show what I think about Chemistry practicals. 100
12. I benefit when I learn to avoid accidents during Chemistry practicals.
- Yes, because I learn how to handle different dangerous substances. 101
- Yes, but small accidents help me remember how it should be done. 102
- Yes, because learning to avoid accidents teaches me to be more careful about what I am doing. 103
- None of these show what I think about Chemistry practicals. 104

13. I benefit from recording and reporting the Chemistry practicals we do.
- Yes, because I learn to present the practical in the right way. 105
- Yes, recording and reporting the practical benefit me, but make the practical boring. 106
- Yes, I benefit from recording and reporting practicals because I learn what worked and what did not work. 107
- Yes, I benefit because when I want to remember something, I check my record. 108
- Yes, recording and reporting the practical benefit me, but some practicals are just to see (not to record). 109
- None of these show what I think about Chemistry practicals. 110

14. Chemistry practicals benefit me because they give me ideas related to Chemistry.
- No, because being taught gives me more ideas related to Chemistry. 111
- Yes, because during practicals I think of different experiments that I can do. 112
- Yes, because Chemistry practicals give me ideas about new apparatus, procedures, formulas or chemicals. 113
- None of these show what I think about Chemistry practicals. 114

15. Chemistry practicals motivate me.
- Yes, because practicals make the subject more interesting. 115
- Yes, because by doing practicals I can develop my skills. 116
- Yes, because a practical opens my mind to a clear picture of what is happening. 117
- Yes, because of the visual stimulation during Chemistry practicals. 118
- Yes, because actually doing a practical is better than sitting behind a desk listening to the teacher talking. 119
- Yes, because it is easier to remember if I see it or do it than if it is explained by a book or teacher. 120
- Yes, because Chemistry practicals help me enjoy Chemistry as a subject. 121
- Yes, because without practicals, Chemistry would be boring. 122
- Yes, because practicals bring a bit more excitement for teachers and pupils. 123
- Yes, and I benefit because with Chemistry practicals I want to learn so I get better marks. 124
- Yes, because I learn things I would not learn if we were just doing theory. 125
- Yes, especially because later in life I may not have the chance to do Chemistry practicals. 126
- None of these show what I think about Chemistry practicals. 127
What do you think of chemistry practicals?

16. A problem of Chemistry practicals is we do not have much time to do practical work.

- No, we do a lot of Chemistry practicals. 128
- No, we have more than enough time to get through each practical we do. 129
- Yes, time is a problem because by the time we get all the equipment ready, the period is already half over. 130
- Yes, time is a problem because practicals don’t always work so it may need to be done over again. 131
- Yes, and some learners take longer to complete a practical than other learners. 132
- Yes, and lack of time makes me rush through the practical. 133
- None of these show what I think about Chemistry practicals. 134

17. A problem of Chemistry practicals is we don’t have enough equipment and chemicals for all the experiments that we need to do.

- Yes, we have this problem because it is expensive to buy these chemicals and equipment. 135
- Yes, and because of this problem sometimes we can only use a little bit of the chemicals. 136
- No, we have all the equipment we need. 137
- Yes, and because of this problem sometimes some chemicals are not available and we cannot see certain reactions. 138
- Yes, and doing practicals is pointless when we don’t have enough chemicals and equipment for a practical. 139
- Yes, but the teachers should use what we have. 140
- Yes, it’s a problem so we need to find out which are important experiments and get the right equipment for them. 141
- None of these show what I think about Chemistry practicals. 142

18. A problem of Chemistry practicals is sometimes the practicals do not go well, or as planned.

- Yes, but it is still fun and exciting when the practicals do not go well. 143
- Yes, but I must do the practical properly so that it goes according to plan. 144
- Yes, but it depends on the resources of the laboratory. 145
- No, because if the practical does not go well I learn what went wrong, so it's not a problem. 146
- No, because doing practical helps me think of all the factors affecting the practical so that I can make the practical work. 147
- Yes, this is a problem so difficult practicals should be done by my teacher. 148
- Yes, and when the practical does not work I am disappointed. 149
- None of these show what I think about Chemistry practicals. 150
19. A problem with Chemistry practicals is the lack of main content. 
(Content = syllabus theory for exams)

- No, because the teacher gives us worksheets with the practicals. 151
- No, I think we have enough content in the practicals. 152
- Yes, because some things that we might find interesting are cut out of the practical. 153
- No, because I personally get enough information from my teacher during the practical. 154
- No, because the basics have been learnt and on that the rest can be built during the practical. 155
- Yes, because I am not always sure what is going on, so I cannot learn the content during the practical. 156
- Yes, because practicals tend to concentrate on specific content and they don’t always link up with the main content. 157
- Yes, sometimes I can learn a lot of content but other times the practical is pointless. 158
- No, because we always keep to the main point of the content during a practical. 159
- None of these show what I think about Chemistry practicals. 160

20. A learner who is not co-operative is a problem in Chemistry practicals.

- Yes, because the learner could cause an accident. 161
- Yes, because I can’t work when someone is fooling around. 162
- Yes, because the teacher usually has to stop whatever she is doing and this wastes a lot of time. 163
- Yes, and this learner won’t know what happened in the practical. 164
- None of these show what I think about Chemistry practicals. 165

21. Chemistry practicals help me understand Chemistry.

- No, because practicals do not help me understand the Chemistry content we do in school. 166
- No, because the practical does not help me if the Chemistry itself is difficult. 167
- Yes, I understand because the practicals show us the work in a fun atmosphere. 168
- Yes, I understand because I actually work with the materials. 169
- Yes, but I understand more clearly if I learn about the Chemistry and then do a practical. 170
- None of these show what I think about Chemistry practicals. 171

22. A problem for learners is not being able to understand what's happening during the Chemistry practical.

- Yes, because I find Chemistry practicals difficult to do. 172
- Yes, especially if I don’t know what to expect while performing the practical. 173
- Yes, especially if the practical doesn’t go exactly the way we’ve been told it's going to go. 174
- Yes, so if we know about the reaction, there is no need to do Chemistry practicals. 175
- No, because what happens in a Chemistry practical is relatively easy to understand. 176
- No, if learners pay attention there would be no problem understanding what's happening in the practical. 177
- None of these show what I think about Chemistry practicals. 178
23. A problem is doing Chemistry practicals in an environment not suitable for practicals.

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<td>Yes, because it is dangerous to learners and teachers to do practicals in an unsuitable environment.</td>
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</tr>
<tr>
<td>Yes, so teachers should decide which practicals can be done in the available room. Teachers should make sure there is a fire extinguisher and sand to put out fires.</td>
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<td>Yes, because practicals done in an unsuitable environment can be inaccurate or may not work.</td>
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24. A problem of Chemistry practicals is teachers expect learners to do things themselves while the learners don’t understand.

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<td>Yes, but sometimes my teacher wants to see what we learners do and think, instead of telling us what to do and think.</td>
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<tr>
<td>Yes, but if the teacher did explain and the learner wasn’t listening then the learner should suffer the consequences.</td>
<td>184</td>
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<tr>
<td>Yes, but it is the learner’s job to solve this problem by asking people or going to the library and trying to understand.</td>
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<td>Yes, it is a problem and that’s why my teacher should explain before the practical.</td>
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PLEASE go back and check that you have circled at least one number for each multiple choice question.

Thank you for your co-operation.

Enjoy your Chemistry practicals!