

北京理工大学

乐学建课教师端操作指南

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一、简单说明

乐学支持教师教学过程的全面覆盖，具体如下：

课程内容自由组织

教师可自由设置课程内容，设置课程起止时间，以及课程格式、小组、成员管理、题库管理等，并根据教学进度自行添加教学资源，组织开展教学活动等。

活动资源类型丰富

除任意格式文件外，提供标签、网页、图书、wiki 等丰富的在线文档形式，另外支持作业及批改、测验与考试、问卷、程序教学、互动评价等多种教学活动，充分满足授课需求。

课程进度及时把控

教学进度跟踪可帮助教师合理组织课程内容，通过设置日期、活动完成情况、成绩要求等多种限制条件实现丰富的学习路径，辅助教师充分掌握学员学习情况。

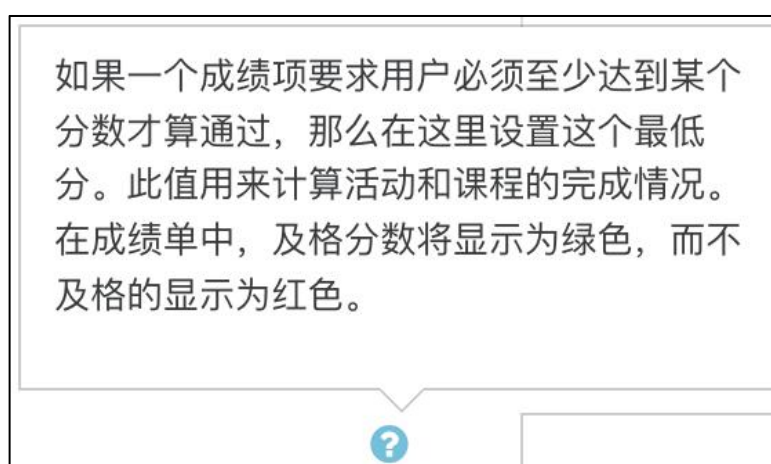
成绩管理形式灵活

自由设定成绩分类，可根据教学需求设置日常成绩与测验成绩，同时支持多种成绩计算方式，配合设置资源或活动成绩设定，让成绩处理更加轻松。

教学互动途径多样

具备即时消息、教学群聊、讨论区等师生沟通途径，可以有效组织学生学术交流、问题讨论，讨论区中的发言内容长期保留并可以对发言进行评比，记录在成绩册。

温馨提示：在乐学里，有很多选项的旁边有蓝色问号标记，鼠标移到上面可以查看说明，以便了解选项功能，进行设置。



在开始设置前，请点击课程标题右侧的齿轮，选择“**打开编辑功能**”开始设置。以下设置指南默认为均已打开编辑功能，处于编辑模式下。编辑结束后，点击齿轮，选择“**关闭编辑功能**”，即可完成编辑。

二、课程设置

点击齿轮，选择“**更改设置**”进入课程设置页面。

课程可见性：显示。

课程结束日期：一般情况下不勾选，如果勾选，到了结束日期，课程会隐藏。

Calculate the end date from the number of sections: 根据课程章节数计算课程结束时间，一般不勾选。

▼ 概要

课程全称 ! ?

课程简称 ! ?

课程类别 ?

课程可见性 ?

课程开始日期 ?

课程结束日期 ? 使用

课程编号 ?

课程格式:

教学周: 按照时间分节, 可根据需要自由增加周次。

2021-计算机科学与技术 设计 (C语言, 徐特立学 院)	<p>+ 9月13日-9月19日 编辑 ▾</p> <p style="color: red;">根据学校通知, 9月18日 (星期六) 按9月20日 (星期一) 教学计划开展教学活动。</p> <p>教学第1周</p> <p>本周内容:</p> <ol style="list-style-type: none"> 了解本课程 (内容、要求、考核方式等等) 了解计算机系统 (概念, 组成, 应用领域), 阅读参考教材《大学计算机》第1, 3章 了解计算思维, 计算机求解问题的过程 通过中国大学爱课程网站注册学习《大学计算机》相关知识, 链接地址: https://www.icourse163.org/course/BIT-47004 授课教师: 李凤霞等。 <p>+ 第一次作业: 说说计算机技术在你期待学习的专业领域所干的那些事 编辑 ▾</p> <p style="text-align: right;">+ 添加一个活动或资源</p>
<p>+ 9月20日-9月26日 编辑 ▾</p> <p style="color: red;">根据学校通知, 9月26日 (星期日) 按10月8日 (星期五) 教学计划开展教学活动。</p> <p>教学第2周</p> <p>本周内容:</p> <ol style="list-style-type: none"> 计算机信息数字化基础、软件系统; 数据在计算机中的表示 (二进制、机器数、补码、ASCII等), 逻辑运算和逻辑变量 	

+ 添加一个活动或资源

+ Add weeks

主题: 按照课程内容分节, 可根据课程需要自由增加章节。

公司财务管理	
参与者	
成绩	
第1章 财务管理总论	文件: 3 标签: 3 测验: 3 进度: 0 / 9
第2章 财务报表分析	文件: 9 标签: 9 测验: 9 进度: 0 / 27
第3章 资金时间价值	文件: 7 标签: 6 测验: 6 进度: 0 / 19
第4章 风险与收益	文件: 5 标签: 5 进度: 0 / 10
第5章 证券估价	文件: 7 标签: 6 进度: 0 / 13
第6章 长期投资决策	
第7章 长期筹资方式	
第8章 资本成本的估计	
第9章 资本结构与杠杆	



2.1 编辑教学周/主题名称

点击标题右侧的笔进行编辑，编辑完成后敲击回车确认。

2.2 添加一个活动或资源

在教学周/主题内想要分节/添加文字说明，可以选择添加标签。

添加 PDF/word/PPT 等教学辅助材料：[添加文件](#)。

其他常用的模块：[测验](#)、[作业](#)、[讨论区](#)、[H5P](#)、[文件](#)、[文件夹](#)。

2.2.1 限制访问

很多资源和活动都有限制访问选项，在这里可以设置学生能否看到这个资源/活动。

常用的访问限制有：

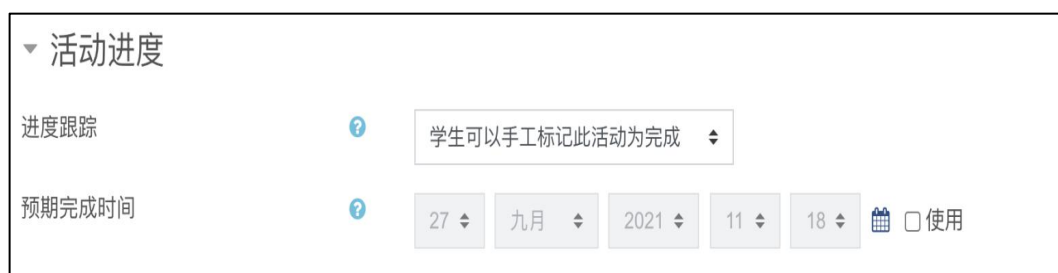
无：不限制。

活动进度： 学生需要先完成（或未完成）其他的某个活动。

日期： 学生在某个日期之前或某个日期之后看不到这个资源/活动。

2.2.2 活动进度

设置活动进度，可以帮助老师掌握学生学习进度。



▼ 活动进度

进度跟踪 ? 学生可以手工标记此活动为完成 ▾

预期完成时间 ? 27 ▾ 九月 ▾ 2021 ▾ 11 ▾ 18 ▾ 使用

学生可以手动标记此活动为完成： 学生学习后自己标记。

当条件都满足时，将活动标记为完成： 根据活动或资源的类别，设置一系列的条件，学生满足条件后，系统自动标记活动完成。

2.3 添加讨论区

讨论区名称： 展示在课程页面的标题。

讨论区简介： 讨论的主题。

在课程页面显示简介： 按需选择。

讨论区类型：

单个简单话题： 教师可以发布一个话题，学生对该话题进行回复。

一般用途的标准讨论区： 每人可以根据讨论内容发布一个或多个话题，其他人可以对话题进行回复。

每人发表一个话题： 每人只能根据讨论内容发布一个话题，其他人可以对话题进行回复。

评分:

老师可以使用这个功能，为学生的讨论评分。

有评分权的角色：默认为 manager、教师、高级助教、初级助教。

汇总类型：不给讨论区打分就选无评分。

选其他选项出来其他的配置。

2.4 编辑题库

点击右上角齿轮，点击“更多” - “题库” - “类别”：



The screenshot shows the course page for '基础免疫学' (Basic Immunology). The page title is '基础免疫学' and the breadcrumb is '网络教室 / 课程 / 基础免疫学'. On the right side, there is a settings menu with the following options: 更改设置 (Change Settings), 打开编辑功能 (Open Edit Function), 课程进度 (Course Progress), 过滤器 (Filter), 成绩单设置 (Grade Sheet Settings), 成果 (Achievements), 备份 (Backup), 恢复 (Restore), 导入 (Import), 重置 (Reset), 回收站 (Recycle Bin), and 更多..... (More.....). The main content area contains a '新闻通告' (News Notice) section with 2 unread posts. The notice text reads: '同学们好! 欢迎来到《基础免疫学》的网络课堂。我们的课程将于9月26日正式开启学习之旅。每周我们会在乐学平台为同学们发布学习任务通知，同学们根据通知完成相关内容的学习。课程的教学视频观看地点为“延河课堂联盟共享课《基础免疫学》” (网址: https://www.yanhekt.cn/course/26345) 在乐学平台查看每个章节的教学课件、完成章节测验，并参与课程相关的话题讨论。如有疑问，欢迎在乐学平台每个章节的“课程交流区”中提出，或通过电子邮件与我联系wangruit@bit.edu.cn。祝同学们学习愉快!'



The screenshot shows the '题库' (Question Bank) page. The page title is '题库'. On the right side, there are four menu items: 题目 (Questions), 类别 (Categories), 导入 (Import), and 导出 (Export).

建议根据课程进度分章节**建立题库子类型**:

在拉到底部的位置添加类别，请注意选择正确的父类别。

将试题添加到题库：点击“更多” - “题库” - “导入”：

题目 类别 导入 导出

从文件导入题目

文件格式

- 嵌入答案 (完形填空)
- 缺失字格式
- Aiken格式
- Blackboard V6+
- Examview
- Gift格式
- Moodle XML格式
- WebCT格式

概要

导入类别: 第二章

从文件中获得类别 从文件中获得场景

匹配成绩: 如果不在列表中, 出错

遇错中止: 是

导入单选题可以用 **AIKEN 格式**：

Aiken 格式是在文本文件中使用人们易读的格式创建多项选择题的一种非常简单的方法。（GIFT 格式有更多选项，可能不太容易出错，但看起来不像 AIKEN 那样直接。）问题必须全部放在一行上。每个答案必须以一个大写字母开头，后跟句点“.”或括号')，然后是一个空格。答案行必须紧随其后，以“ANSWER:”开头（注意冒号后面的空格），然后给出相应的字母。详情请参考附件 1.AIKEN 格式设置指南。

注意：

您必须以 **txt 文本格式**保存文件。不要将其保存为 Word 文档或类似格式。

像“引号”这样的非 ASCII 字符会导致导入错误。为避免这种情况，请始终以 **UTF-8 格式**保存您的文本文件（大多数文本编辑器，比如 Word 都会在点击保存后询问）。

答案字母（A、B、C 等）和单词“ANSWER”必须按如下所示**大写**，否则将导入失败。

这是示例格式：

```
What is the correct answer to this question?  
A. Is it this one?  
B. Maybe this answer?  
C. Possibly this one?  
D. Must be this one!  
ANSWER: D  
或者：  
Which LMS has the most quiz import formats?  
A) Moodle  
B) ATutor  
C) Claroline  
D) Blackboard  
E) WebCT  
F) Ilias  
ANSWER: A
```

其他题型也可以用 **GIFT 格式**，常用题型有：**选择题、填空题、判断题**。以下是示例格式：

单选题：

```
为了提高权益报酬率，企业不可以通过什么途径实现： {  
~改善经营成果，提高净利率
```

~提高资产使用效率

~合理提高杠杆

=降低资产负债率

}

或者

为了提高权益报酬率，企业不可以通过什么途径实现：{

~%-100%改善经营成果，提高净利率

~%-100%提高资产使用效率

~%-100%合理提高杠杆

~%100%降低资产负债率

}

多选题：

A、B 是正确选项，选择 AB 得全部分数，选择 A 或 B 得一半分数，选择了 C 或 D 不得分。（温馨提示：您可以参照此格式，自由设置每个选项的权重）

下列财务指标中，反映企业营运能力的指标有：{

~%50%存货周转率

~%50%总资产周转率

~%-100%应付账款周转率

~%-100%以上均是

}

下列财务比率中，反映企业短期偿债能力的指标有 () {

~%33.33333%现金比率

~%-100%资产负债率

~%33.33333%流动比率

~%-100%产权比率

~%33.33333%速动比率

}

填空题:

企业的营运周期，主要受{=应收账款周转天数和存货周转天数}的影响。

如果有多个答案满足条件，您也可以这样设置:

企业的营运周期，主要受{=应收账款周转天数和存货周转天数 =存货周转天数和应收账款周转天数}的影响。

判断题:

企业的资产使用效率可以通过改进流动资产周转率来实现。{T}

其他题型设置方法请参考附件 2.GIFT 格式设置指南。

2.4 添加测验

+ [添加一个活动或资源](#)



时间安排：建议设置

开始时间：什么时候开始可以使用。

结束时间：什么时间之后就不能答题了。

时间限制：学生单次答题最多答题时长。

成绩：建议设置,根据需要进行设置（成绩类别可能不需要）

及格线：如果设置了，不及格的显示是红色，及格是绿色。

允许答题次数：学生可以尝试多少次。

布局：根据需要

导航方式：自由模式可以跳题，顺序模式只能一道一道做。

回顾设置：

回顾设置 ?

当用户回顾试卷或看测验报告时，这些选项可以控制用户能看到什么信息。

作答过程中只能在某种作答方式上有效，如“直到答对法”在每次作答时都会显示反馈。

刚刚答完的意思是答完题目后的两分钟内。

晚一些，但测验仍然开放的意思是答完2分钟后到测验关闭的这段时间。

测验关闭后指的是已经过了测验关闭时间的时候。如果测验没有设定关闭时间，此状态不会生效。

通常，打开 **刚刚答完** 或者 **晚一些** 两个选项下面的：**此次答题、是否正确、分数、标准答案、总体反馈**。请根据测验类型自由设置。

2.5 编辑测验（添加和删除题目）

点击测验进入，点击“齿轮” - “编辑测验”：



添加试题：

添加一道试题：手动添加。

从题库：选择一个题库里的试题加入到测验里。

添加一道随机题：从题库选一定数量的随机题加入测验中。

如果试题较多，建议先用导入的方式建立题库，（见“编辑题库”）然后再选择从题库或者添加随机题。

注意从题库里选题时的题库范围。



重新分页：分页方式。



选择多个项：批量管理题目。

分数设置:

每道题的右边可以编辑每道题的分数，右上角可以看到试题总分。如果试题总分高于最高分，学生全部答对也只能得到最高分。



右上角-随机排列试题：学生答题的时候随机显示试题的顺序。

2.6 互动评价

用于学生作业互评。



设置阶段	提交阶段 切换到提交阶段○	评价阶段 切换到评价阶段○	成绩核定阶段 切换到成绩核定阶段○	关闭 关闭互动评价○
当前阶段 ● ✓ 设置此互动评价的描述 ✗ 提供提交说明 ✓ 编辑评价表单 ✓ 切换到下一阶段	✓ 提供评价说明 ✓ 分配提交 预计: 4 已提交: 0 待分配: 0		✓ 计算提交成绩 预计: 4 已计算: 0 ✓ 计算评价成绩 预计: 4 已计算: 0 ✓ 提供本活动的总结	

设置阶段:

概要:

互动评价名称

互动评价描述: 作业题目, 可以设置多个题目。

互动评价名称 !

描述

↕ A B I ↵ ☰ ☷ 🔗 🔗 🖼️ 📎 🎤 📺 📄 H-P

1、(25分) What are the ideals of green chemistry?
 2、(25分) Please list some goods that can be recycled.
 3、(25分) Please give a definition of recycling.
 4、(25分) Please imagine what the the purpose of establishment of World Ocean Day is.

在课程页面显示简介 [?](#)

提交设置:

提交说明: 用来解释学生提交作业的内容。

提交类型: 选择学生提交作业的内容类型。

迟的提交: 设置学生是否可以在截止日期后提交。

提交说明

每个作业一个附件，最多支持四个附件。

提交类型

在线文本 是必需的

文件附件 是必需的

提交附件的最大数量

4

提交附件允许的文件类型

选择 无选择

最大提交附件大小

100MB

迟的提交

允许在截止日期后提交

评分设置:

提交的成绩: 学生交作业, 最多可以拿的分数。

评价成绩: 学生评作业, 最多可以获得的分数。

评分策略: 累加, 最终学生拿到的成绩是提交的成绩 (实际得分) + 评价成绩 (实际得分) 。

例如, 设置提交的成绩为 80, 评价成绩为 20, 学生提交作业而不参与互动评价, 最多可得 80 分。学生只参与评价, 不提交作业, 最多可以拿 20 分。

评价设置:

评价说明: 用来解释评价内容。

学生可以评价自己的作业: 一般关闭, 关闭后学生不会被分配到自己的作业。

有效性:

设置提交时间。没有设置结束时间，需要老师自己手动进行提交阶段->评价阶段的转换。

有效性

提交打开从 30 九月 2021 00 00 使用

提交截止日期 14 十月 2021 00 00 使用

在提交截止日期后切换到下一阶段 ?

评价开放日期 14 十月 2021 00 00 使用

评价截止日期 21 十月 2021 00 00 使用

设置完成后，点击“保存并预览” - “编辑评价表单”，设置采分点。

Environmental Security, Green Chemistry 互动评价

设置阶段

设置阶段	提交阶段	评价阶段	成绩核定阶段	关闭
当前阶段 ●	切换到提交阶段 ○	切换到评价阶段 ○	切换到成绩核定阶段 ○	关闭互动评价 ○
<input checked="" type="checkbox"/> 设置此互动评价的描述 <input checked="" type="checkbox"/> 提供提交说明 <input checked="" type="checkbox"/> 编辑评价表单 <input checked="" type="checkbox"/> 切换到下一阶段	<input checked="" type="checkbox"/> 提供评价说明 <input checked="" type="checkbox"/> 设置预计划分配 <input checked="" type="checkbox"/> 分配提交 预计: 49 已提交: 0 待分配: 0 <input checked="" type="checkbox"/> 提交打开从2021年09月30日 星期四 00:00 (明天) <input checked="" type="checkbox"/> 提交截止日期: 2021年10月14日 星期四 00:00 (剩余 15 天) <input checked="" type="checkbox"/> 您不受时间限制	<input checked="" type="checkbox"/> 评价开放日期 2021年10月14日 星期四 00:00 (剩余 15 天) <input checked="" type="checkbox"/> 评价截止日期: 2021年10月21日 星期四 00:00 (剩余 22 天) <input checked="" type="checkbox"/> 您不受时间限制	<input checked="" type="checkbox"/> 计算提交成绩 预计: 49 已计算: 0 <input checked="" type="checkbox"/> 计算评价成绩 预计: 49 已计算: 0 <input checked="" type="checkbox"/> 提供本活动的总结	

采分点 1

描述

请给第一题打分。

最高分数/等级

类型 分数

最高分

25

提交阶段:

点击“切换到提交阶段”，学生可以提交他们的作业。

学生提交作业、教师分配提交的作业给其他学生。

点击“分配提交”

提交阶段

当前阶段 ●

- ✍ 提供评价说明
- ✓ 分配提交
 - 预计：4
 - 已提交：1
 - 待分配：0
- ⓘ 至少还有一个作者没有提交他们的作品
- ✍ 切换到下一阶段

有三种分配方式：手动分配、随机分配、预计划分配。

手动分配：为参与者手动指定评价人以及被评价人。

随机分配：为目前已经提交的作业随机分配评分人，评价次数：每个评价人几份/每份作业被评价几次。

预计划分配：设置了结束时间。结束时间到了之后，系统根据设置的参数进行随机分配。

评价阶段：

学生评价自己分到的作品。

成绩核定阶段：

核定学生获得的最终总分。

学生要获得评价成绩，会将学生给别人的打分与别人的最终得分相比较，给别人的打分与最终得分越相近，得分越高。比较评价设置越严格，相同的偏差，学生获得的分数就越低。

2.7 成绩

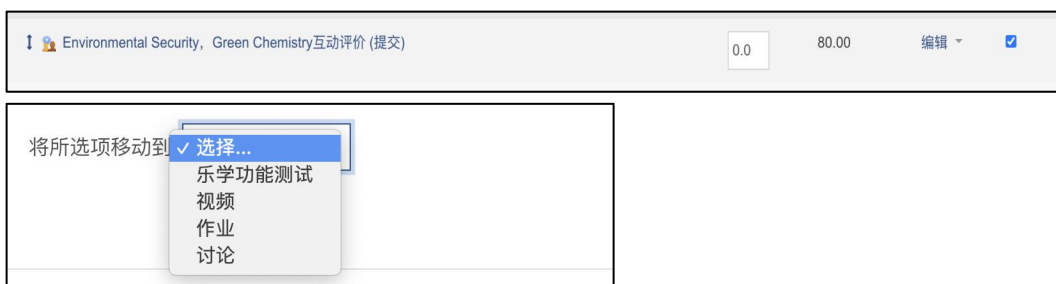
2.7.1 成绩计算方法设置

整门课程的成绩为一个大类别，在这个大类别下可以根据需要建立多个小的类别，例如测验、作业、互评等。





移动某一个成绩项到指定分类下：选定一个成绩项，拉到页面最下面，将所选项移动到想要的分类下。



每个类别可以设置成绩核算规则，为下面的子分类和成绩项设置评分规则。

常用的有：（假设 a 类(最高分数为 100)包括 A1、A2 和 A3 3 个项目(最高分数分别为 100、80 和 10);如果一个学生的成绩是 A1=70, A2=20, A3=10)

平均分：对 a 的分数计算如下：

A1 -->70/100=0.7, A2 --> 20/80=0.25, A3 -->10/10=1
A: (0.7 + 0.25 + 1.0)/3 = 0.65 --> 65/100 --> 65

加权平均分：每个成绩项都可以被赋予一个权重。简单地说，类别“总分”将等于每个成绩项的分数乘以其分数权重，这个总和最后除以所有权重的总和。下面是示例。

A1: 70 out of 100 weight 10, A2: 20 out of 80 weight 5, A3: 10 out of 10 weight 3, category A: maximum grade 100
A1 -->70/100=0.7, A2 --> 20/80=0.25, A3 -->10/10=1
A: (0.7*10 + 0.25*5 + 1.0*3)/(10 + 5 + 3) = 0.625 --> 62.5/100 --> 62.5 (out of 100)

简单加权平均分（一般不建议使用）：与加权平均分的不同之处在于，每个成绩项的权重为其最高分。如：

A1 --> 70/100, A2 --> 20/80, A3 --> 10/10, category max 100:
A: (0.7*100 + 0.25*80 + 1.0*10)/(100 + 80 + 10) = 0.526 --> 52.6/100 --> 52.6 (out of 100)


其他设置请参考附件 3.成绩设置指南。

2.7.2 查看学生成绩

点击右边栏的“成绩”项，即可查看学生的成绩情况。

🎓 乐学功能测试
👥 参与者
📊 成绩
📁 第1讲：课程简介
📁 第2讲：认识计算
📁 第3讲：认识计算机

2.8 查看学生活动情况

乐学功能测试 

网络教室 / 我的课程 / 培训与指导类 / 乐学使用方法 / 乐学功能测试

- 📊 成果
- 📁 备份
- ↑ 恢复
- ↑ 导入
- ← 重置
- 📁 课程文件
- 🗑️ 回收站
- ⚙️ 更多.....

Aiken format

The Aiken format is a very simple way of creating multiple choice questions using a clear human-readable format in a text file. (The GIFT format has many more options and perhaps is less prone to errors, but doesn't look as straight-forward as AIKEN.) The question must be all on one line. Each answer must start with a single uppercase letter, followed by a period '.' or a bracket ')', then a space. The answer line must immediately follow, starting with "ANSWER: " (NOTE the space after the colon) and then giving the appropriate letter.

IMPORTANT NOTES:

- You have to save the file in a **text format**. Don't save it as a Word document or anything like that.
- Non-ASCII characters like 'quotes' can cause import errors. To avoid this always save your text file in UTF-8 format (most text editors, even Word, will ask you).
- The answer letters (A,B,C etc.) and the word "ANSWER" **must** be capitalised as shown below, otherwise the import will fail.

Here is an example of the format:

```
What is the correct answer to this question?
```

- ```
A. Is it this one?
B. Maybe this answer?
C. Possibly this one?
D. Must be this one!
```

```
ANSWER: D
```

```
Which LMS has the most quiz import formats?
```

- ```
A) Moodle
B) ATutor
C) Claroline
D) Blackboard
E) WebCT
F) Ilias
```

```
ANSWER: A
```

Both these examples imported into Moodle gave questions looking like:

Which LMS has the most quiz import formats? Choose one answer.

- a. Blackboard
- b. WebCT
- c. ATutor
- d. Moodle
- e. Claroline
- f. Ilias

Contents

- 1 Importing
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- 3 Hints and Tips
- 4 See also

Importing


When importing there are many options, but these do not influence Aiken Format import:

- Get category from file [
- Get context from file [
- Match grades [Error if grade not listed/Nearest grade if not listed]
- Stop on error [Yes/No]

Exporting

Moodle does not have an Aiken format export. See MDL-21904 (<https://tracker.moodle.org/browse/MDL-21904>). Jean-Michel Vedrine committed on 9 Oct 2014 some code in GitHub (<https://github.com/jmvedrine/moodle/commit/ed6bf151da57e52a4f6fd4526d85d35b763fb8bf>).

Hints and Tips


- Use a text editor, like PSPad, (Windows "notepad" may not save with right encoding) to write the file with questions and save as a TXT file in UTF-8 format. Use only simple ' not slant ones ´ ` ! Avoid other exotic characters like ... HORIZONTAL ELLIPSIS (<http://www.fileformat.info/info/unicode/char/2026/index.htm> , three dots as a single character).
- Moodle XML Converter (<http://moodle.herokuapp.com>) - more extensive version of AIKEN format. Supports almost all Moodle questions types - multichoice, shortanswer, cloze, essay, order, matching, numeric, truefalse

See also

- Import questions
- GIFT

Retrieved from "https://docs.moodle.org/38/en/index.php?title=Aiken_format&oldid=125435"

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GIFT format

Main page ► Managing a Moodle course ► Questions ► Managing questions ► Export questions ► GIFT format

GIFT format allows someone to use a text editor to write multiple-choice, true-false, short answer, matching missing word and numerical questions in a simple format that can be imported. The GIFT format is also an export file format available in Question bank. The format has been developed within the Moodle Community but other software may support it to a greater or lesser degree.

- When creating a large numbers of questions, GIFT can provide a quick way of bulk loading questions either into a question category, or into a Lesson.
- Sometimes it is easier proofing questions in a question category by viewing them in a GIFT file.

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General instructions

At least one blank line must be left between each question.

In the simple form, the question comes first, then the answers are set in between brackets, with an equal sign (=) indicating the correct answer(s) and tilde (~) the wrong answers. A hash (#) will insert a response. Questions can be weighted by placing percentage signs (%..%) around the weight. Comments are preceded by double slashes (//) and are not imported.

Here are some useful GIFT examples (http://moodle.org/pluginfile.php/134/mod_forum/attachment/236161/GIFT-examples.zip) than can be imported or used as rough template. Many of the examples below used the questions in the file as a starting point.

UTF-8 encoding

Any GIFT file **must** be correctly encoded in UTF-8. You can use Microsoft's text editor Notepad which comes with Windows to save your file in UTF-8.

Note: ANSI format will (only) work for languages without any special characters (like ä, ö, ü, æ, å, ø, œ or ß). And don't use "Unicode" as format as this is actually UTF-16 and won't work. See Converting files to UTF-8 for further information.

Format symbols

Here are some common GIFT symbols and their use.

Symbols	Use
// text	Comment until end of line (optional)
::title::	Question title (optional)
text	Question text (becomes title if no title specified)
[...format...]	The format of the following bit of text. Options are [html], [moodle], [plain] and [markdown]. The default is [moodle] for the question text, other parts of the question default to the format used for the question text.
{	Start answer(s) -- without any answers, text is a description of following questions
{T} or {F}	True or False answer; also {TRUE} and {FALSE}
{ ... =right ... }	Correct answer for multiple choice, (multiple answer? -- see page comments) or fill-in-the-blank
{ ... ~wrong ... }	Incorrect answer for multiple choice or multiple answer
{ ... =item -> match ... }	Answer for matching questions
#feedback text	Answer feedback for preceding multiple, fill-in-the-blank, or numeric answers
####general feedback	General feedback
{#	Start numeric answer(s)
answer:tolerance	Numeric answer accepted within ± tolerance range
low..high	Lower and upper range values of accepted numeric answer
=%n%answer:tolerance	n percent credit for one of multiple numeric ranges within tolerance from answer
}	End answer(s)
\character	Backslash escapes the special meaning of ~, =, #, {, }, and :
\n	Places a newline in question text -- blank lines delimit questions

Here are some quick examples:

```
// true/false
::Q1:: 1+1=2 {T}

// multiple choice with specified feedback for right and wrong answers
::Q2:: What's between orange and green in the spectrum?
{ =yellow # right; good! ~red # wrong, it's yellow ~blue # wrong, it's
yellow }

// fill-in-the-blank
::Q3:: Two plus {=two =2} equals four.

// matching
::Q4:: Which animal eats which food? { =cat -> cat food =dog -> dog food }

// math range question
::Q5:: What is a number from 1 to 5? {#3:2}

// math range specified with interval end points
::Q6:: What is a number from 1 to 5? {#1..5}
// translated on import to the same as Q5, but unavailable from Moodle
question interface

// multiple numeric answers with partial credit and feedback
::Q7:: When was Ulysses S. Grant born? {#
    =1822:0 # Correct! Full credit.
    =%50%1822:2 # He was born in 1822. Half credit for being close.
}

// essay
::Q8:: How are you? {}
```

Format symbols explained

The multiple choice format below as a comment line // for the question, when Moodle exports it the question unique id number will appear here.

The first set of :: precedes the question title.

The second :: precedes the actual question. The first { indicates the start of the answers. The correct answer is preceded by an = sign and wrong answers by a ~. Teacher responses have a # in front of them. The question ends with a } and then a blank line. NOTE it is { } not () parenthesis! Usually these are obtained with help of the [AltGr] key.

```
//Comment line
::Question title
:: Question {
=A correct answer
~Wrong answer1
#A response to wrong answer1
~Wrong answer2
#A response to wrong answer2
~Wrong answer3
#A response to wrong answer3
~Wrong answer4
#A response to wrong answer4
}
```

The shortest format for a multiple choice question is:

```
Question{= A Correct Answer ~Wrong answer1 ~Wrong answer2 ~Wrong answer3
~Wrong answer4 }
```

Tip: If you don't specify a question title the WHOLE question will be used as the title at the time of import into Moodle. There are pros and cons to allowing this to happen.

- Cons: This can add a lot of unnecessary words. This can include characters which might confuse the export GIFT process.
- Pros: On the other hand, if the start of each question is different, it can make finding a single question easier in a category list of questions. It will save you typing. Having the same title for every question is a very bad idea.

Question format examples

There are several ways to use a text editor to write a GIFT format. We will try to show the simple version for example and in some formats we will introduce some more complex features that can be imported into many Moodle Question formats.

Multiple choice

For multiple choice questions, wrong answers are prefixed with a tilde (~) and the correct answer is prefixed with an equal sign (=).

Here is a simple acceptable GIFT multiple choice format:

```
Who's buried in Grant's tomb?{=Grant ~no one ~Napoleon ~Churchill ~Mother
Teresa }
```

Here is a longer format that uses most of the GIFT elements:

```
// question: 1 name: Grants tomb
::Grants tomb::Who is buried in Grant's tomb in New York City? {
=Grant
~No one
#Was true for 12 years, but Grant's remains were buried in the tomb in
1897
~Napoleon
#He was buried in France
~Churchill
#He was buried in England
~Mother Teresa
#She was buried in India
}
```

Multiple choice with multiple right answers

That is, using checkboxes, not radio buttons:

```
What two people are entombed in Grant's tomb? {
  ~%-100%No one
  ~%50%Grant
  ~%50%Grant's wife
  ~%-100%Grant's father
}
```

True-false

In this question-type the answer indicates whether the statement is true or false. The answer should be written as {TRUE} or {FALSE}, or abbreviated to {T} or {F}.

```
// question: 0 name: TrueStatement using {T} style
::TrueStatement about Grant::Grant was buried in a tomb in New York City.
{T}

// question: 0 name: FalseStatement using {FALSE} style
::FalseStatement about sun::The sun rises in the West.{FALSE}
```

Short answer

Answers in Short Answer question-type are all prefixed by an equal sign (=), indicating that they are all correct answers. The answers must not contain a tilde.

Here are two examples using the simple method showing possible right answers for credit.

```
Who's buried in Grant's tomb?{=Grant =Ulysses S. Grant =Ulysses Grant}
```

```
Two plus two equals {=four =4}
```

If there is only one correct Short Answer, it may be written without the equal sign prefix, as long as it cannot be confused as True-False.

Matching

Matching pairs begin with an equal sign (=) and are separated by this symbol "->". There must be at least three matching pairs.

```
Match the following countries with their corresponding capitals. {
  =Canada -> Ottawa
  =Italy -> Rome
  =Japan -> Tokyo
  =India -> New Delhi
}
```

Matching questions do not support feedback or percentage answer weights.

Missing word

The Missing Word format automatically inserts a fill-in-the-blank line (like this _____) in the middle of the sentence. To use the Missing Word format, place the answers where you want the line to appear in the sentence.

```
Moodle costs {~lots of money =nothing ~a small amount} to download from
moodle.org.
```

If the answers come before the closing punctuation mark, a fill-in-the-blank line will be inserted for the "missing word" format. All question types can be written in the Missing Word format.

There must be a blank line (double carriage return) separating questions. For clarity, the answers can be written on separate lines and even indented. Some examples:


```

Mahatma Gandhi's birthday is an Indian holiday on {
~15th
~3rd
=2nd
} of October.

Since {
~495 AD
=1066 AD
~1215 AD
~ 43 AD
}
the town of Hastings England has been "famous with visitors".

```

Numerical questions

The answer section for Numerical questions must start with a number sign (#). Numerical answers can include an error margin, which is written following the correct answer, separated by a colon. So for example, if the correct answer is anything between 1.5 and 2.5, then it would be written as follows `{#2:0.5}`. This indicates that 2 with an error margin of 0.5 is correct (i.e., the span from 1.5 to 2.5). If no error margin is specified, it will be assumed to be zero.

Here is a simple numerical format question. It will accept a range of 5 years.

```
When was Ulysses S. Grant born?{#1822:5}
```

It is a good idea to check the margins of the range, 3.141 is not counted as correct and 3.142 is considered in the range.

```
What is the value of pi (to 3 decimal places)? {#3.14159:0.0005}.
```

Optionally, numerical answers can be written as a span in the following format `{#MinimumValue..MaximumValue}`.

```
What is the value of pi (to 3 decimal places)? {#3.141..3.142}.
```

Moodle's browser interface does not support multiple numerical answers, but Moodle's code can and so does GIFT. This can be used to specify numerical multiple spans, and can be particularly usefully when combined with percentage weight grades. If multiple answers are used, they must be separated by an equal sign, like short answer questions.

```

When was Ulysses S. Grant born? {#
=1822:0
=%50%1822:2
}

```

Note that since Moodle's browser GUI didn't support multiple answers for Numerical questions, there's no way in older Moodle versions to see them or edit them through Moodle. The only way to change a numerical answer beyond the first, is to delete the question and re-import it (or use something like phpMyAdmin). But better would be to upgrade your Moodle to at least 1.9.

Essay

An essay question is simply a question with an empty answer field. Nothing is permitted between the curly braces at all.

```
Write a short biography of Dag Hammarskjöld. {}
```

Description

A description "question" has no answer part at all

```
You can use your pencil and paper for these next math questions.
```

Options

In addition to these basic question types, this filter offers the following options: line comments, question name, feedback and percentage answer weight.

Line Comments

Comments that will not be imported into Moodle can be included in the text file. This can be used to provide headers or more information about questions. All lines that start with a double backslash (not counting tabs or spaces) will be ignored by the filter.

```
// Subheading: Numerical questions below
What's 2 plus 2? {#4}
```

Comments will be exported from Moodle and will include the unique question id. The above question after it was imported and then exported from Moodle:

```
// question: 914 name: What's 2 plus 2?
::What's 2 plus 2?::What's 2 plus 2?{#
  =4:0#
}
```

Question Name

A question name can be specified by placing it first and enclosing it within double colons (::.....:).

```
::Kanji Origins::Japanese characters originally
came from what country? {=China}
```

```
::Thanksgiving Date::The American holiday of Thanksgiving is
celebrated on the {~second ~third =fourth} Thursday of November.
```

If no question name is specified, the entire question will be used as the name by default.

Feedback

Feedback can be included for each answer by following the answer with a number sign (# also known as a hash mark) and the feedback.

```
What's the answer to this multiple-choice question? {
  ~wrong answer#feedback comment on the wrong answer
  ~another wrong answer#feedback comment on this wrong answer
  =right answer#Very good!
}

//From The Hitchhiker's Guide to the Galaxy
Deep Thought said " {
  =forty two#Correct according to The Hitchhiker's Guide to the Galaxy!
  =42#Correct, as told to Loonquawl and Phouchg
  =forty-two#Correct!
} is the Ultimate Answer to the Ultimate Question of Life, The Universe,
and Everything."

  42 is the Absolute Answer to everything.{
FALSE#42is the Ultimate Answer.#You gave the right answer.}
```

For Multiple Choice questions, feedback is displayed only for the answer the student selected. For short answer, feedback is shown only when students input the corresponding correct answer. For true-false questions, there can be one or two feedback strings. The first is shown if the student gives the wrong answer. The second if the student gives the right answer.

Percentage Answer Weights

Percentage answer weights are available for both Multiple Choice and Short Answer questions. Percentage answer weights can be included by following the tilde (for Multiple Choice) or equal sign (for Short Answer) with the desired percent enclosed within percent signs (e.g., %50%). This option can be combined with feedback comments.

```
Difficult question.{~wrong answer ~%50%half credit answer =full credit answer}
```

```

::Jesus' hometown::Jesus Christ was from {
  ~Jerusalem#This was an important city, but the wrong answer.
  ~%25%Bethlehem#He was born here, but not raised here.
  ~%50%Galilee#You need to be more specific.
  =Nazareth#Yes! That's right!
}.

::Jesus' hometown:: Jesus Christ was from {
  =Nazareth#Yes! That's right!
  =%75%Nazereth#Right, but misspelled.
  =%25%Bethlehem#He was born here, but not raised here.
}

```

Note that the last two examples are essentially the same question, first as multiple choice and then as short answer.

Note that it is possible to specify percentage answer weights that are NOT available through the browser interface. The Match Grades drop-down on the import page determines how these are handled. You can either request that an error be reported or that the answer weight be adjusted to the nearest valid answer weight.

Note specifically, that Moodle uses 5 decimal places to do its math, so if you wish to divide percentages in thirds, use %33.33333 instead of %33 or %33.33.

Specify text-formatting for the question The question text (only) may have an optional text format specified. Currently the available formats are moodle (Moodle Auto-Format), html (HTML format), plain (Plain text format) and markdown (Markdown format). The format is specified in square brackets immediately before the question text. See Formatting text for further information.

```

[markdown]The *American holiday of Thanksgiving* is celebrated on the {
  ~second
  ~third
  =fourth
} Thursday of November.

```

Multiple Answers

The Multiple Answers option is used for multiple choice questions when two or more answers must be selected in order to obtain full credit. The multiple answers option is enabled by assigning partial answer weight to multiple answers, while allowing no single answer to receive full credit.

```

What two people are entombed in Grant's tomb? {
  ~No one
  ~%50%Grant
  ~%50%Grant's wife
  ~Grant's father
}

```

Note that there is no equal sign (=) in any answer and the answers should total no more than 100%, otherwise Moodle will return an error. To avoid the problem of students automatically getting 100% by simply checking all of the answers, it is best to include negative answer weights for wrong answers.

```

What two people are entombed in Grant's tomb? {
  ~%-50%No one
  ~%50%Grant
  ~%50%Grant's wife
  ~%-50%Grant's father
}

```

Special Characters ~ = # { }

These symbols ~ = # { } : control the operation of this filter and cannot be used as normal text within questions. Since these symbols have a special role in determining the operation of this filter, they are called "control characters." But sometimes you may want to use one of these characters, for example to show a mathematical formula in a question. The way to get around this problem is "escaping" the control characters. This means simply putting a backslash (\) before a control character so the filter will know that you want to use it as a literal character instead of as a control character. For example:

```
Which answer equals 5? {
  ~ \= 2 + 2
  = \= 2 + 3
  ~ \= 2 + 4
}
```

```
::GIFT Control Characters::
Which of the following is NOT a control character for the GIFT import
format? {
  ~ \~      # \~ is a control character.
  ~ \=      # \= is a control character.
  ~ \#      # \# is a control character.
  ~ \{      # \{ is a control character.
  ~ \}      # \} is a control character.
  = \       # Correct! \ (backslash) is not a control character. BUT,
            it is used to escape the control characters.
}
```

When the question is processed, the backslash is removed and is not saved in Moodle.

HTML in answers

The GIFT format will interpret HTML correctly if you add [html] in front of the question. See this forum thread (<https://moodle.org/mod/forum/discuss.php?d=334375>).

Specifying Categories

It is possible to change the category into which the questions are added within the GIFT file. You can change the category as many times as you wish within the file. All questions after the modifier up to the next modifier or the end of the file will be added to the specified category. Up to the first category modifier the category specified on the import screen will be used. Note that for this to work the from file: box must be ticked on the import screen.

To include a category modifier include a line like this (with a blank line before and after):

```
$CATEGORY: tom/dick/harry
```

or simply

```
$CATEGORY: mycategory
```

...the first example specifies a path of nested categories. In this case the questions will go into harry. The categories are created if they do not exist.

To find out how your categories are organized, you might try exporting some questions including category data first and check the exported GIFT formatted file. The lowest level of system context might give you something like \$CATEGORY: \$system\$/...

Making questions case sensitive

Short Answer questions can be made case sensitive by changing "0" to "1" in the following line **of your moodle/question/format/gift/format.php file**:

```
$question->usecase = 0; // Ignore case
```

Hints and Tips

- Use the ::title:: at the beginning of every question to organize your questions when Moodle presents a list or exports them as another GIFT file. When the title is left blank, Moodle will put the beginning of the question as the title. Some teachers want to see something like "001 LIT101 Poe ref Purloin Letter" or "The Purloin Letter was written by (AmLit pg 254)" in the title.
- You can specify markup if you need to format the question by setting [html], [moodle], [plain] or [markdown] just before the question text. See more about this in the reference pdf below.
- In the Lesson module, in a question page, correct answers jump by default to Next page and incorrect answers jump to This page (i.e. student has to "try again"). When

importing from a GIFT format file, this is exactly the mechanism which is used.

- If you want a student to be taken directly from one question to the next irrespective of their answer being correct or incorrect: in the Lesson Settings, set Maximum number of attempts: to 1.
 - Please note, however, that a message "correct / incorrect" will still be displayed to the student upon answering each question. If you do not want this (default) feedback message to be displayed then enter your own feedback message (i.e. "continue", "---", etc.)
 - In case you want no visible message displayed then enter a non-breaking space as feedback. Moodle will not put it's automatic response because it sees the blank space. To do this, put a # after the answer and write ` `; (without spaces between these characters).
- Need to use a special GIFT character in your question or answer? Put a \ in front of the GIFT character.
 - For example if you want to use curly braces, { or }, or equal sign, =, or # or ~ in a GIFT file (in a math question including TeX expressions) you must "escape" them by preceding them with a \ directly in front of each { or } or =. It is possible to use a replace program/macro/editor filter to do this conversion before importing to Moodle.
- Want to change T/F type questions to multiple choice? Consider exporting the T/F questions as a GIFT file, then using a text editor to replace the (T) with (=True ~False). Perhaps change the title slightly so you will recognize the new questions.
- Alphabetic case-sensitive comparison is disabled by default. If you need case-sensitive comparison for short answer questions (an unusual need), precede them with:

```
$question->usecase = 1;
```

surrounded by blank lines.

Tools that create or process GIFTs

Several contributors have used macros to generate GIFT files from a more familiar popular programs.

- Here is a Moodle Cloze and Gift generator (<http://hbwubecc.wixsite.com/jordan/tools>) as presented at the 2017 Moodle Moot Japan.
- There are Word macros available for easily creating GIFT files. See this forum thread (<https://moodle.org/mod/forum/discuss.php?d=135112>) for links to downloadable files for different Word versions..
- There are several Excel spreadsheets for generating GIFT files. Several people have built upon other contributors work.
 - The latest version was posted on 10 April 2007 and can be found in this thread with this file name: Excel2GIFTv1.1.zip by Timothy Takemoto (<http://moodle.org/mod/forum/discuss.php?d=66660>). There is also a set of instructions Excel2GIFTv1.1_Instructions.rtf by Jeff Shek on the same day in that thread.
 - video tutorial (<http://video.google.com/videoplay?docid=-6612645502883459334#>) for using Excel2GIFTv2.xls
 - An earlier version of this Excel spreadsheet for generating multiple choice GIFT files initially created by Olga Forlani and improved by A. T. Wyatt (<http://moodle.org/mod/forum/discuss.php?d=45245>).
- There is a project, Libre Office templates, for generating GIFT files in Writer. It is located in

OOo template 2013 to write exams and convert to GIFT format (<https://code.google.com/p/libre-gift/downloads/list>)

- There are Open Office templates for generating GIFT files in Writer. These are located in the Quiz forum in the OOo template to write exams and convert to GIFT format thread (<http://moodle.org/mod/forum/discuss.php?d=20705&parent=168385>).
 - The most recent for OO 2.x is "OOo2GIFT_Template_05.zip" posted 17 December 2005 by Enrique Castro.
 - An earlier version is "GIFT_template_OOo.zip" posted 22 March 2005 by Enrique Castro.

- There is an easy to use on line multiple question generator at a4esl.org (<http://a4esl.org/c/qw.html>). Here you write your question(s) without formatting marks, select Moodle and press the generate quiz button. This creates GIFT formatted text that can be pasted into a file for importing into Moodle.
 - The initial format requires fewer keystrokes (it uses line position and returns) than the GIFT format, so you should save time and be less likely to create invalid data.
 - Quiz authoring template for Microsoft Word link (<http://moodle.org/mod/data/view.php?d=13&rid=578>)
 - Moodle XML Converter [1] (<http://vletools.com>)
 - GIFT format parser library in Ruby [2] (<http://github.com/stuart/gift-parser>)
- GIFT grammar using PEG.js (JavaScript) that parses GIFT into JavaScript objects [3] (<https://github.com/fuhrmanator/GIFT-grammar-PEG.js>)
 - Online GIFT question validator (editor) based on the PEG.js grammar above [4] (<https://fuhrmanator.github.io/GIFT-grammar-PEG.js/docs/editor/>)
- gift-wrapper (<https://github.com/manuvazquez/gift-wrapper>) is a Python package to generate GIFT-formatted questions in a more user-friendly way
- py2gift (<https://github.com/manuvazquez/py2gift>) is a python library (primarily) intended to make GIFT files from jupyter (<https://jupyter.org/>) notebooks

GIFT format with medias (images, sound...)

The GIFT with medias optional plugin (https://moodle.org/plugins/pluginversions.php?plugin=qformat_giftmedia) is an import format similar to Gift and uses the same syntax, but instead of a text file it imports a zip file containing the gift text file and media files (images, sounds, ...). A documentation explain how to include medias in your questions.

See also


- Here is a 2-column PDF GIFT Reference Sheet (http://buypct.com/gift_reference.pdf)
- Import and export FAQ
- Aiken Format

External links

- Google Summer of Code 2010 Proposal: GIFT Conversion (http://en.wikiversity.org/wiki/Google_Summer_of_Code_2010_Proposal:_GIFT_Conversion) (Wikiversity)
- GIFT Format for Quiz Items with Images (<http://www.moodlenews.com/2014/gift-format-for-quiz-items-with-images/>)
- On line Gift format generator from plain text (<http://text2gift.atwebpages.com/Text2GiftConverter.html>)

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Grade aggregation

Main page ► Managing a Moodle course ► Tracking progress ► Grades ► Grade aggregation

The aggregation drop-down menu lets you choose the aggregation strategy used to calculate the overall grade of a grade category. The different options are explained below.

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- 2 Mean of grades
- 3 Weighted mean
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Aggregation strategy

All grades are first converted to percentage values (interval from 0 to 1), then aggregated using one of the strategies below and finally converted to the associated category item's range (between Minimum grade and Maximum grade). In the following we assume that all Minimum grades are equal to 0.

Important: An "empty grade" is a missing gradebook entry, and could mean different things. For example, it could be a participant who hasn't yet submitted an assignment, an assignment submission not yet graded by the teacher, or a grade that has been manually deleted by the gradebook administrator. Caution in interpreting these "empty grades" is thus advised.

Mean of grades

It yields the sum of all grades divided by the total number of grades. For instance: assume a category A (with Maximum grade equal to 100) includes 3 items A1, A2 and A3 (with maximum grades equal to 100, 80 and 10 respectively); if a student scores A1=70, A2=20 and A3=10, then we have the following grade calculation for A:

```
A1 -->70/100=0.7, A2 --> 20/80=0.25, A3 -->10/10=1
A: (0.7 + 0.25 + 1.0)/3 = 0.65 --> 65/100 --> 65 (the maximum grade for
category A is 100).
```

Weighted mean

Each grade item can be given a weight to change its importance in the overall mean. In simple terms, the category "total" will be equal to the sum of the scores in each grade item each multiplied by its grade weight, and that sum being finally divided by the sum of all weights. This is shown in the following example (with the same assumptions of the previous case).

```
A1: 70 out of 100 weight 10, A2: 20 out of 80 weight 5, A3: 10 out of
10 weight 3, category A: maximum grade 100
A1 -->70/100=0.7, A2 --> 20/80=0.25, A3 -->10/10=1
A: (0.7*10 + 0.25*5 + 1.0*3)/(10 + 5 + 3) = 0.625 --> 62.5/100 --> 62.5
(out of 100)
```

Simple weighted mean

The difference from Weighted mean is that the weight of each item is its Maximum grade. For instance, using the same assumptions of the first case:

```
A1 --> 70/100, A2 --> 20/80, A3 --> 10/10, category max 100:
A: (0.7*100 + 0.25*80 + 1.0*10)/(100 + 80 + 10) = 0.526 --> 52.6/100 --
> 52.6 (out of 100)
```

When the "Simple weighted mean" aggregation strategy is used, a grade item can act as Extra credit for the category. This means that the grade item's maximum grade will not be added to the category total's maximum grade, but the item's grade will. For example, if A3 is marked as extra credit in the above calculation:

```
A1 --> 70/100, A2 --> 20/80, A3 (extra credit) 10/10, category max 100:
A: (0.7*100 + 0.2*80 + 1.0*10)/(100 + 80) = 0.555 --> 55.6 (out of 100)
```

Mean of grades (with extra credits)

Arithmetic mean with a twist. An old, now unsupported, aggregation strategy provided here only for backward compatibility with old activities.

A value greater than 0 treats a grade item's grades as extra credit during aggregation. The number is a factor by which the grade value will be multiplied before it is added to the sum of all grades, but the item itself will not be counted in the division. For example:

- Item 1 is graded 0-100 and its "Extra credit" value is set to 2
- Item 2 is graded 0-100 and its "Extra credit" value is left at 0
- Item 3 is graded 0-100 and its "Extra credit" value is left at 0
- All 3 items belong to Category 1, which has "Mean of grades (with extra credits)" as its aggregation strategy
- A student gets graded 20 on Item 1, 40 on Item 2 and 70 on Item 3
- The student's total for Category 1 will be 95/100 since $20*2 + (40 + 70)/2 = 95$

Median of grades

The middle value (or the mean of the two middle values) when percentages (the ratios between grades and their maximum values) are arranged in order of value. The advantage over the mean is that it is not affected by outliers (grades which are uncommonly far from the mean).

```
A1 70/100, A2 20/80, A3 10/10, category max 100:
A: median(0.7, 0.25, 1.0) --> 0.70 --> 70/100
```

Smallest grade

The result is the smallest grade after normalisation ([https://en.wikipedia.org/wiki/Normalization_\(statistics\)](https://en.wikipedia.org/wiki/Normalization_(statistics))). It is usually used in combination with Aggregate only non-empty grades.

```
A1 70/100, A2 20/80, A3 10/10, category max 100:
min(0.7, 0.25, 1.0) = 0.25 --> 25/100
```

Highest grade

The result is the highest grade after normalisation ([https://en.wikipedia.org/wiki/Normalization_\(statistics\)](https://en.wikipedia.org/wiki/Normalization_(statistics))).

```
A1: 70/100, A2: 20/80, A3: 10/10, category max 100:
A: max(0.7, 0.25, 1.0) = 1.0 --> 100/100
```

Mode of grades

The mode is the [normalisation ([https://en.wikipedia.org/wiki/Normalization_\(statistics\)](https://en.wikipedia.org/wiki/Normalization_(statistics))) normalised] grade that occurs the most frequently. It is often used for non-numerical grades. The advantage over the mean is that it is not affected by outliers (grades which are uncommonly far from the mean). However it loses its meaning once there is more than one most frequently occurring grade (only one is kept), or when all the grades are different from each other.

```
A1 70/100, A2 35/50, A3 20/80, A4 10/10, A5 7/10 category max 100:
A: mode(0.7, 0.7, 0.25, 1.0, 0.7) = 0.7 --> 70/100
```

Natural

This is the sum of all grade values, scaled by their relative weights. The Maximum grade of the category is the sum of the maximums of all aggregated items.

A1 70/100, A2 20/80, A3 10/10, without forcing weights:
 A: $(70 + 20 + 10)/(100 + 80 + 10) \rightarrow 100/190$

Note: Scale grades are ignored.

When the "Natural" aggregation strategy is used, a grade item can act as Extra credit for the category. This means that the grade item's maximum grade will not be added to the category total's maximum grade, but the item's grade will. Following is an example:

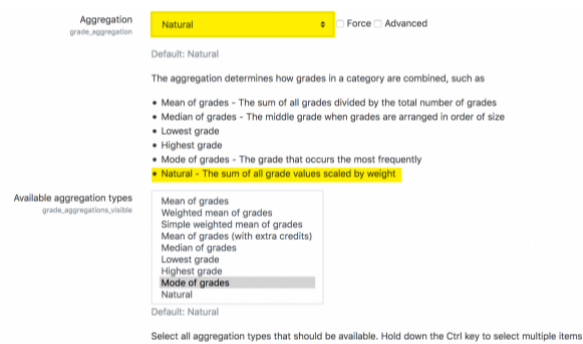
- Item 1 is graded 0-100
- Item 2 is graded 0-75
- Item 1 has the "Act as extra credit" checkbox ticked, Item 2 doesn't.
- Both items belong to Category 1, which has "Natural" as its aggregation strategy
- Category 1's total will be graded 0-75
- A student gets graded 20 on Item 1 and 70 on Item 2
- The student's total for Category 1 will be 75/75 (20+70 = 90 but Item 1 only acts as extra credit, so it brings the total to its maximum)

Natural aggregation functions as a sum of grades when the weight boxes are left alone. In this situation, the numbers in the weight boxes are informational and represent the effective weights in the sum. Natural aggregation can also function as a mean of grades, when the weight boxes are checked and then adjusted so that the weights are equal across a set of items in a category, or across a set of categories. Items can still be marked as "Extra credit" while using the weights to calculate a mean, and contribute to the total for the category.

Available aggregation types

The default is 'Natural' but the administrator can specify other types from *Site administration > administration > Grades > Grade category settings*.


Note that reducing the number of aggregation types simply results in disabled aggregation types not appearing in the aggregation type dropdown menu. All existing grade category calculations remain the same, regardless of whether the aggregation type is later disabled by an administrator.



Available aggregation types setting

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